



TOP)A)K)U)S)T)I)K) 

INSPIRED LISTENING

EDITION 2019/2020

# BEAUTY MEETS PERFORMANCE

Every room engages and impacts our senses. The first impression we gain is visual: we take in the room's design. Then, at a more subconscious level and after some delay, we become aware of its acoustics. TOPAKUSTIK and TOPPERFO will meet all your expectations in terms of design and acoustics: products that deliver inspired listening!

You'll find all our products in this brochure: our tried-and-tested TOPAKUSTIK range with its characteristic grooving as well as TOPPERFO with even smaller perforations so the sound absorption function becomes virtually invisible. Almost fifty photographs from ten different countries show the convincing results of the successful use of our products.

TOPAKUSTIK is far more than a mere brand name. Nearly one hundred individuals work in our planning and production departments, and our team of experienced specialists are at your disposal for advisory services, sales and distribution. We're looking forward to working on your project!

Georg Hegglin, CEO



HQ "La Française", Boulevard Raspail, Paris  
Architect: Franklin Azzi, Paris – Photo: Luc Boegly, Paris  
Product: TOPPERFO Micro 2/2/0.5, Oak veneered

This ceiling, consisting entirely of triangular shapes, adds that special extra touch to the reception area at the headquarters of finance group "La Française" on Boulevard Raspail in Paris. Over 30 different triangles were first produced in our factory and then the ready-to-install elements were quickly and easily mounted on site.

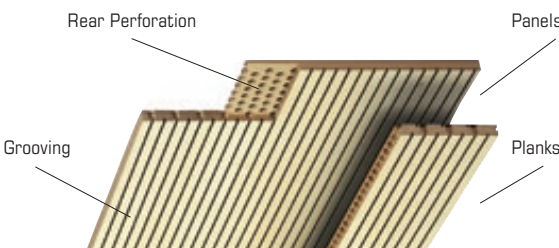




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THE REFINED ACOUSTIC SYSTEM  
TOP(A)K(U)S(T)I(K)<sup>®</sup>

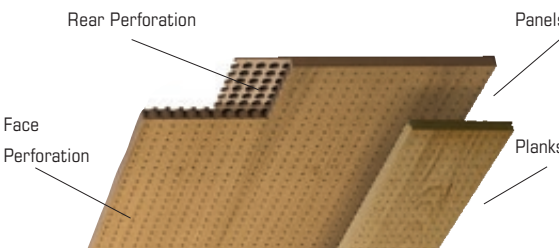
Available in planks with a tongue and groove connection (plank width = 128 mm\*) for joint-free surface appearance or in panels (panel width = 300 – 1200 mm) for removable or fixed ceilings, walls or cabinet fronts.



TECHNICAL  
INFORMATION

PERFORATION AS REQUIRED  
TOP(P)E(R)F(O)<sup>®</sup>

A wide range of perforations for wall and ceiling finishes. Conventional M-Perforation, discrete T-Perforation or micro perforations (Clou + Micro). Available in panels and planks.



**NEW!**

= new Products

**!** The information in boxes is very important and should be read carefully !

\* 1 INCH = 25.4 mm e.q. 128 mm = 5.04"

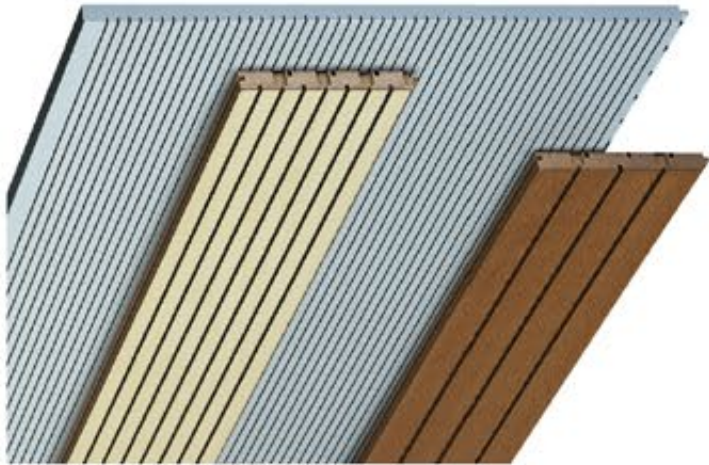
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TECHNIC

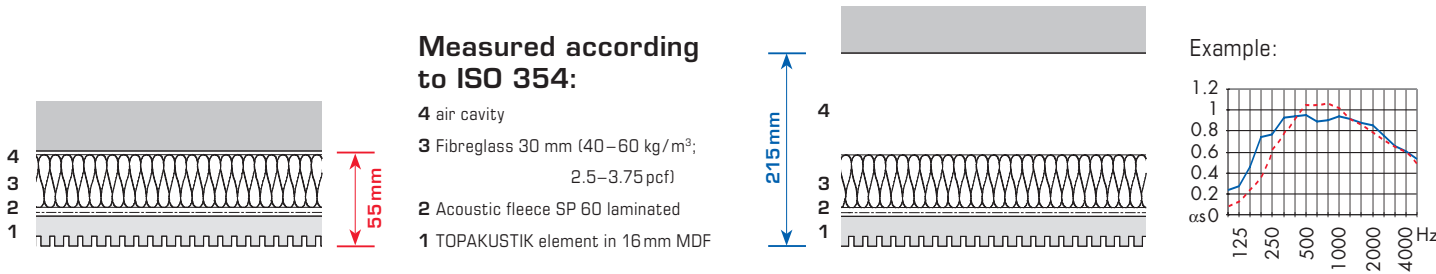
# TOPAKUSTIK®

The refined acoustic system for wall and ceiling finishes. Many different groove patterns are available. Narrow spaced grooves appear as a textured surface (6/2, 8/3, 9/2) – wider spaced grooves can be seen individually by the eyes (12/4, 13/3, 14/2, 19/2, 28/4). Thanks to the rear perforation pattern, the core panel remains structurally intact allowing for cutouts (programmed or field performed) to address penetrations required for lighting, HVAC and sprinkler systems.

Please note: Walls finished with lighter veneers (maple, birch) or lighter paint (white) can have a visually disturbing effect (flickering-Moiré Pattern) from the light to dark contrast from the face surface to the grooves. In these areas we recommend using the TOPAKUSTIK designs with 2 mm wide groove e.g. type 9/2 or 14/2 or 19/2 and/or using darker veneers or darker paint colours to minimize this effect.



## THE ACOUSTIC SYSTEM

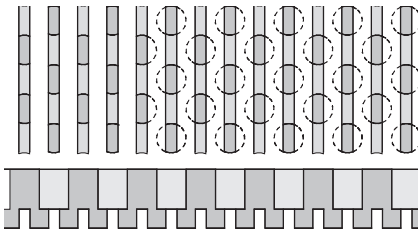


All TOPAKUSTIK types are available with M and T perforations on the rear. This makes it possible for acousticians to match the TOPAKUSTIK surface treatment with the required absorption. The absorption coefficients stated in this brochure were measured according to the ISO 354 standard and are set up as described above. Additional absorption coefficients with other cavity depths and other porous materials in the air cavity (e.g. only fleece, melamine resin foam, etc.) are listed in the TOPAKUSTIK/TOPPERFO sound absorption document.

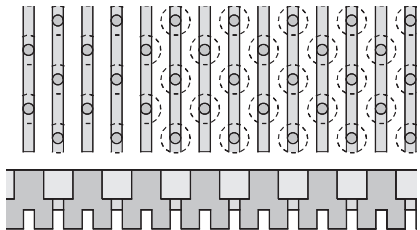
The sound absorption of our products is measured in a reverberation room in accordance with DIN ISO 354:1985. This provides the  $\alpha_s$  (alpha) values either listed in tabular form or plotted on a chart. You can find such charts in the descriptions of the individual products. The  $\alpha_w$  value given in the table is the weighted sound absorption level that is calculated using a standardized method. The classification into Euroclasses A, B, C, D and E is calculated and derived from the  $\alpha_w$  value (A = highest absorption capacity) The NRC (noise reduction coefficient) is the value specified according to the US standard ASTM C423. Behind each  $\alpha_w$  value are the letters L, M and/or H to indicate if the sound absorption of the product is greater than 0.25 in a specific frequency range. L is for low or 250 Hz, M is for mid or 500 or 1000 Hz, and H is for high or 2000 or 4000 Hz.

| $\alpha_w$ | Euro | NRC  |
|------------|------|------|
| 0.80 M     | B    | 0.88 |
| 0.75 M     | C    | 0.87 |

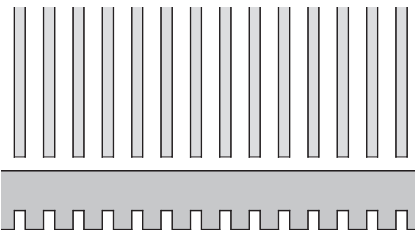
**M-Perforation:** For absorption in the medium to high frequency range. TOPAKUSTIK products with M-Perforation are suited for applications in which the reverberation time is to be lowered across a broad frequency band.



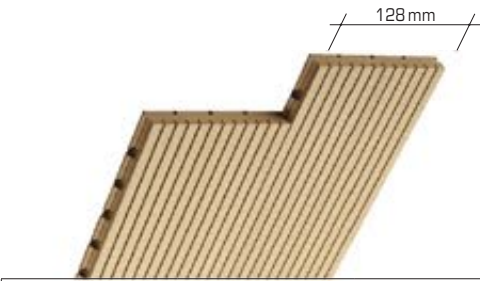
**T-Perforation:** For absorption in the low to medium frequency range. The high absorption in the low-frequency range is based on the combination of small holes on the visible side and larger holes on the rear.



**Reflectors:** TOPAKUSTIK products can also be used as reflectors by eliminating the perforations on the rear surface. The absorption figures are then equivalent to those of a standard reflecting panel.

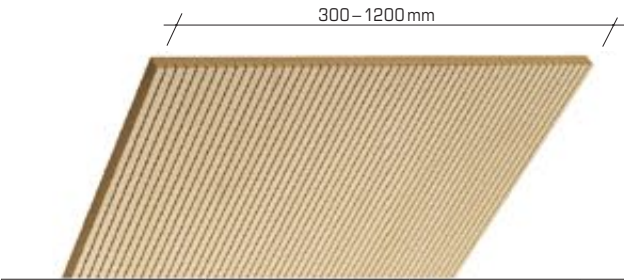


## DIMENSIONS AND MATERIALS



**Planks**  
Thanks to the precise tongue and groove connection, planks result in an attractive surface with a joint-free appearance, because the connecting joint matches the dimension of the grooves. The planks permit simple and flexible assembly. They can be installed by stapling to a timber batten or clamping to a T-bar with TOPAKUSTIK clips. (Assembly p. 24)

| not fire rated D-s2,d0 (DIN B2)   |                          |                | fire retardant B-s2,d0 (DIN B1) |                          |                | non-flammable            |                          |
|-----------------------------------|--------------------------|----------------|---------------------------------|--------------------------|----------------|--------------------------|--------------------------|
| Paint 16 mm                       | Wood Veneer 17 mm        | Melamine 16 mm | Paint 16 mm                     | Wood Veneer 17 mm        | Melamine 16 mm | Paint 16 mm              | Wood Veneer 17 mm        |
| Standard                          |                          |                |                                 |                          |                |                          |                          |
| 2780 × 128                        | 2780 × 128<br>3640 × 128 | 2780 × 128     | 2780 × 128                      | 2780 × 128<br>3640 × 128 | 2780 × 128     | 2540 × 128<br>3080 × 128 | 2540 × 128<br>3080 × 128 |
| 4080 × 128                        |                          | 4080 × 128     | 4080 × 128                      |                          | 4080 × 128     |                          |                          |
| custom lengths are also available |                          |                |                                 |                          |                |                          |                          |



**Panels**  
Panels are used for removable or fixed ceilings and walls with visible joints. Panels can be provided with a number of different edges (p. 22) and are also suited for cabinet fronts and room dividers.

| not fire rated D-s2,d0 (DIN B2)                                           |                   |                | fire retardant B-s2,d0 (DIN B1) |                   |                | non-flammable |                   |
|---------------------------------------------------------------------------|-------------------|----------------|---------------------------------|-------------------|----------------|---------------|-------------------|
| Paint 16 mm                                                               | Wood Veneer 17 mm | Melamine 16 mm | Paint 16 mm                     | Wood Veneer 17 mm | Melamine 16 mm | Paint 16 mm   | Wood Veneer 17 mm |
| max.                                                                      |                   |                |                                 |                   |                |               |                   |
| 4080 × 1216                                                               | 3640 × 1216       | 4080 × 1216    | 4080 × 1216                     | 3640 × 1216       | 4080 × 1216    | 3080 × 1216   | 3080 × 1216       |
| ideal = means optimal use of MDF core – custom lengths are also available |                   |                |                                 |                   |                |               |                   |
| 2040 × 992/640                                                            | 2040 × 992/640    | 2040 × 992/640 | 2040 × 992/640                  | 2040 × 992/640    | 2040 × 992/640 | 1540 × 608    | 1540 × 608        |
| 2780 × 992/640                                                            | 2780 × 992/640    | 2780 × 992/640 | 2780 × 992/640                  | 2780 × 992/640    | 2780 × 992/640 | 2540 × 608    | 2540 × 608        |
| 3640 × 640                                                                | 3640 × 640        |                |                                 | 3640 × 640        |                | 3080 × 608    | 3080 × 608        |



**Interrupted grooves:**  
With panels, the grooves can be interrupted. The distance can be chosen as required.

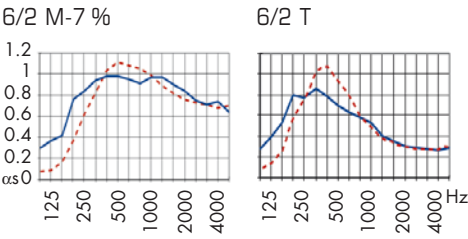
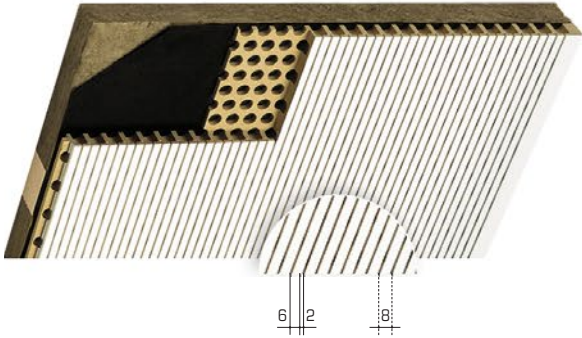
TOP(A)K(U)S(T)I(K)<sup>®</sup>

NARROW GROOVING  
CENTER-TO-CENTER  
DISTANCE = 8mm or 10.66mm

This grooving is less «visible» as the interaction of light and shadow occurs regularly due to the close spacing of the grooves, thus creating a 2-dimensional effect. The narrow grooves require perfect assembly, as even the smallest differences in the surface are visible.

See page 5 for dimensions and materials  
See page 20/21 for surfaces

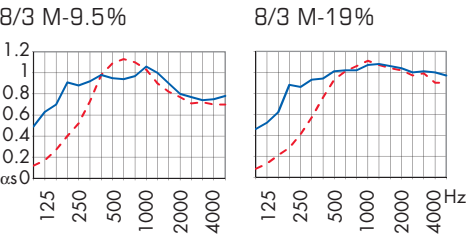
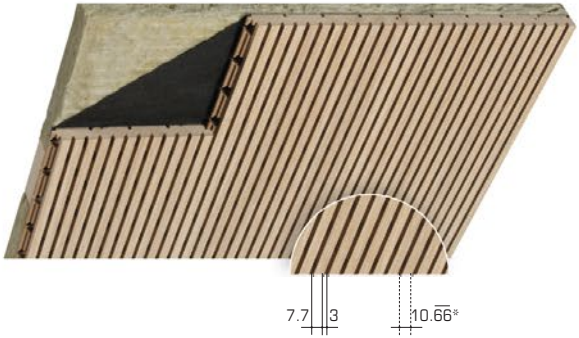
Type 6/2 M or T



TOTAL THICKNESS  
— ≈ 215 mm  
- - - ≈ 55 mm  
More information Page 4

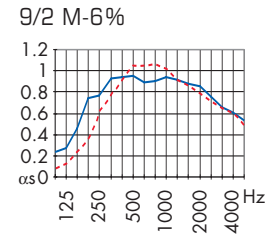
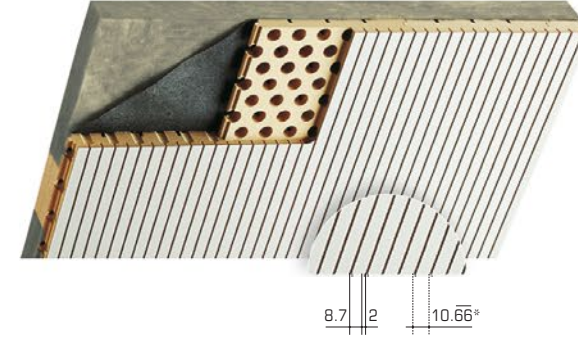
| αw     | Euro | NRC  | αw      | Euro | NRC  |
|--------|------|------|---------|------|------|
| 0.85 M | B    | 0.91 | 0.40 LM | D    | 0.57 |
| 0.80 M | B    | 0.86 | 0.40 LM | D    | 0.62 |

Type 8/3 M



| αw     | Euro | NRC  | αw     | Euro | NRC  |
|--------|------|------|--------|------|------|
| 0.85 L | B    | 0.92 | 1.00   | A    | 1    |
| 0.8 M  | B    | 0.85 | 0.7 MH | C    | 0.87 |

Type 9/2 M



Type 8/3 + 9/2:  
please respect  
10.66mm for  
planning

| αw     | Euro | NRC  |
|--------|------|------|
| 0.75 L | C    | 0.82 |
| 0.75 M | C    | 0.85 |

1 LVM, Münster DE – Architect: HPP Düsseldorf, DE – Photo: HGEsch / Hennef, Blankenberg DE    2 Pilatus Businesscenter, CH    3 AVM Computersysteme, Berlin DE – Architect: Trucks Architekten, Berlin DE



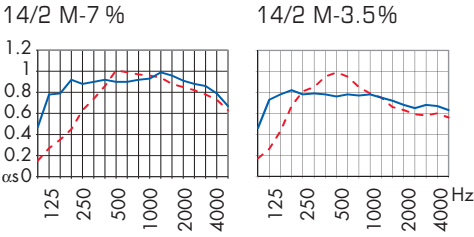
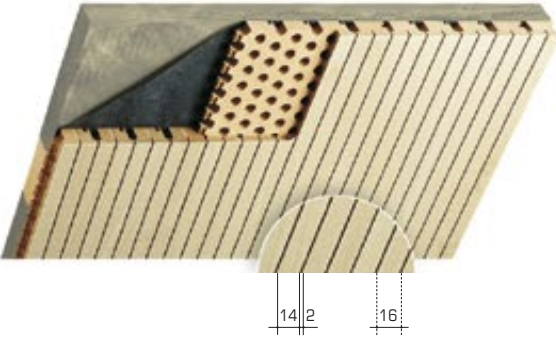
TOP(A)K(U)S(T)I(K)<sup>®</sup>

MEDIUM-SIZED  
GROOVING  
CENTER-TO-CENTER  
DISTANCE = 16 mm

The most popular TOPAKUSTIK types. High sound  
absorption combined with easy assembly. The  
grooving is visible even from a long distance.

See page 5 for dimensions and materials  
See page 20/21 for surfaces

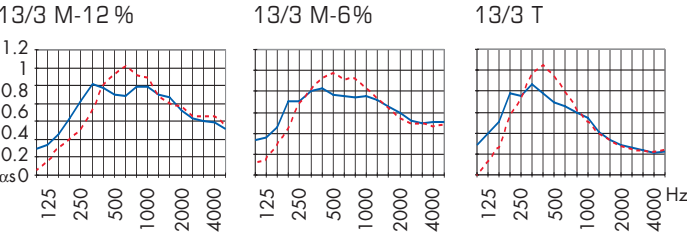
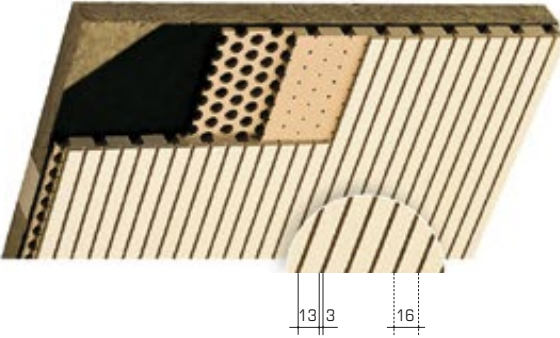
Type 14/2 M



TOTAL THICKNESS  
— ≈ 215 mm  
- - - ≈ 55 mm  
More information Page 4

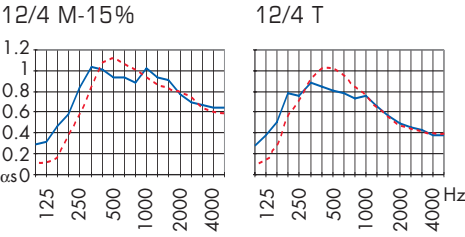
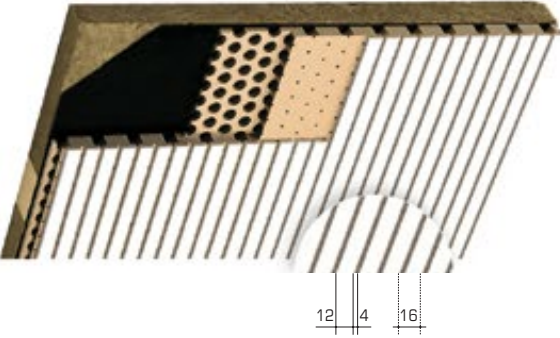
| $\alpha_w$ | Euro | NRC  | $\alpha_w$ | Euro | NRC  |
|------------|------|------|------------|------|------|
| 0.90       | A    | 0.89 | 0.75 L     | C    | 0.74 |
| 0.85       | B    | 0.86 | 0.65 LM    | C    | 0.79 |

Type 13/3 M or T



| $\alpha_w$ | Euro | NRC  | $\alpha_w$ | Euro | NRC  | $\alpha_w$ | Euro | NRC  |
|------------|------|------|------------|------|------|------------|------|------|
| 0.75 L     | C    | 0.86 | 0.65 L     | C    | 0.71 | 0.35 LM    | D    | 0.57 |
| 0.75 M     | C    | 0.88 | 0.60 LM    | C    | 0.76 | 0.35 LM    | D    | 0.62 |

Type 12/4 M or T



| $\alpha_w$ | Euro | NRC  | $\alpha_w$ | Euro | NRC  |
|------------|------|------|------------|------|------|
| 0.80 M     | B    | 0.86 | 0.63 L     | C    | 0.71 |
| 0.80       | B    | 0.89 | 0.57 LM    | C    | 0.74 |

4 AWZ, Kleindöttingen CH – Architect: Birchmeier Uhlmann Architekten, Zürich ZH – Photo: Sibylle Kathriner Fotografie, Stans CH 5 Alfred Wegener Institut, Bremerhaven DE – Architect: Westphal Architekten, Bremen DE – Photo: Anke Müllerklein, Hamburg DE 6 Hôpital Leon Bérard, Lyon



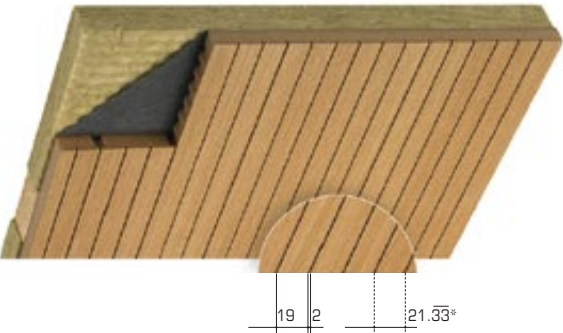
TOP(A)K(U)S(T)I(K)<sup>®</sup>

WIDE GROOVING  
CENTER-TO-CENTER  
DISTANCE = 21.3 or 32 mm

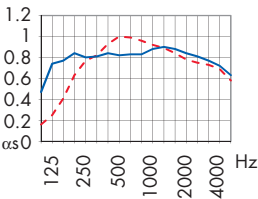
These grooves are the ideal solution for standard absorption requirements. As with all centre-to-centre distances, the wide grooving comes with 2 mm, 3 mm and 4 mm groove, as laid out in this and page 11.

See page 5 for dimensions and materials  
See page 20/21 for surfaces

Type 19/2 M



19/2 M-6%



! Type 19/2:  
please respect  
21.33 mm\* for  
planning

TOTAL THICKNESS

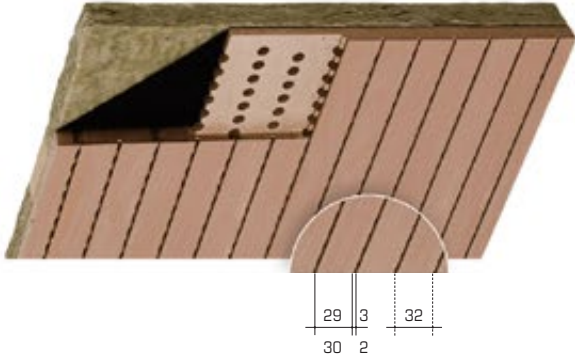
— ≈ 215 mm

- - - ≈ 55 mm

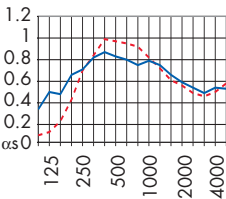
More information Page 4

| αw   | Euro | NRC  |
|------|------|------|
| 0.85 | B    | 0.82 |
| 0.80 | B    | 0.85 |

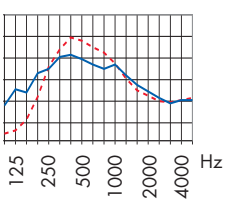
Type 29/3 M & 30/2 M



29/3 M-6%



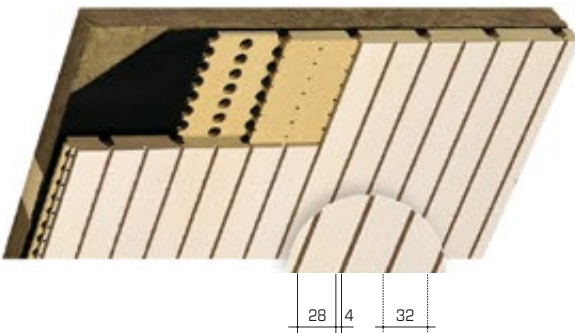
30/2 M-3.5%



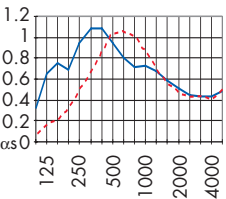
| αw      | Euro | NRC  |
|---------|------|------|
| 0.65 L  | C    | 0.73 |
| 0.60 LM | C    | 0.76 |

| αw      | Euro | NRC  |
|---------|------|------|
| 0.55 LM | D    | 0.68 |
| 0.50 LM | D    | 0.72 |

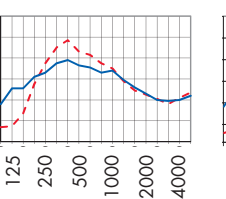
Type 28/4 M or T



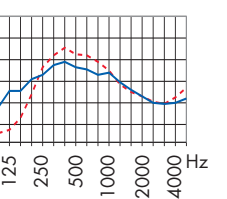
28/4 M-7.5%



28/4 M-3.75%



28/4 T



| αw      | Euro | NRC  |
|---------|------|------|
| 0.55 LM | D    | 0.78 |
| 0.55 M  | D    | 0.72 |

| αw     | Euro | NRC  |
|--------|------|------|
| 0.5 LM | D    | 0.63 |
| 0.5 LM | D    | 0.69 |

| αw      | Euro | NRC  |
|---------|------|------|
| 0.25 LM | E    | 0.41 |
| 0.25 LM | E    | 0.47 |

7 Landratsamt Ostallgäu, Marktoberdorf DE – Architect: Stadtmüller.Burkhardt.Graf Architekten GbR, Kaufbeuren DE – Photo: Klein & Schneider GbR, Mindelheim DE 8 University of Sydney AU –

Architect: Kannfinch, Sydney AU – Photo: Euroline Pty Ltd., Auburn AU 9 Wheaton High School, USA – Architect : Grimm + Parkins Architects, USA – Photo: Kevin Burns, USA



## COMPOSING A MASTERPIECE

Should you require each panel to be a different shape or a standard solution is preferred – we can manufacture both. For products that are easier to use such as our TOPAKUSTIK planks, you can decide how the surface will look. You can choose any RAL/NCS colour, any commercially available wood veneer or perhaps you prefer a decorative melamine resin finish, with many being available. Whatever your choice, we'll be delighted to play our part in composing your «MASTERPIECE».



*Aviva HQ, St. Helens Tower, London GB  
Architect: TTSP Archi. + Design, London GB – Photo: Nick Gultridge, London GB  
Product: TOPAKUSTIK Planks 14/2 M-7%*

This auditorium is naturally dominated by the gigantic screen that extends across its entire front. But all the other walls are covered with TOPAKUSTIK planks to ensure that the acoustics are perfect! Another benefit: the warmth emanated by the genuine wood veneer provides a pleasant counterbalance to the otherwise cool interior.



TOP(A)K(U)S(T)I(K)<sup>®</sup>

SPECIAL GROOVES

Would you like the grooving to be something special?  
How about our type Caro, or the type HR 9/2 M with its semicircular grooves? Many more variations are possible: for instance, the distance between the grooves can be widened to 64 or 96 mm. Absorption values are available.

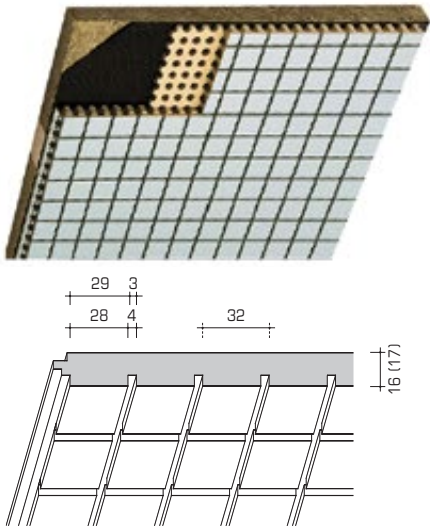
|             |        |      |      |
|-------------|--------|------|------|
| Caro 29/3 M | α w    | Euro | NRC  |
| 215 mm      | 0.85   | B    | 0.84 |
| 55 mm       | 0.80 M | B    | 0.85 |

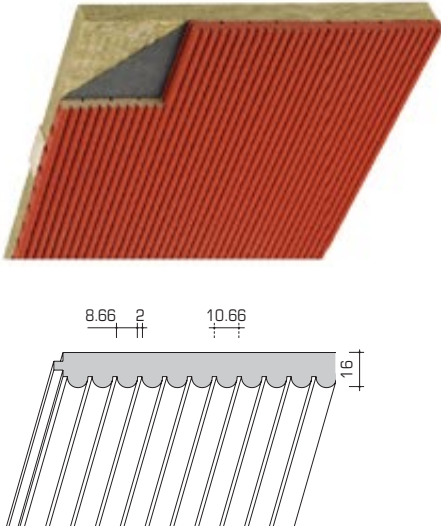
|          |        |      |      |
|----------|--------|------|------|
| HR 9/2 M | α w    | Euro | NRC  |
| 215 mm   | 0.75 L | C    | 0.82 |
| 55 mm    | 0.75 M | C    | 0.85 |

|                           |                                                                                                |                                                                                     |
|---------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Surface:                  |  (only paint) |  |
| Grooving:                 | 28/4 M + 29/3 M                                                                                | HR 9/2 M                                                                            |
| Fire category core panel: | fire retardant B-s2,d0 (US = Class A) and standard MDF D-s2,d0 (US = Class C)                  |                                                                                     |
| Formats/Dimensions:       | Panels max. 3640 × 1250 mm                                                                     | Planks max. 3800 × 128 mm                                                           |

Caro M



HR 9/2 M



TOP(A)K(U)S(T)I(K)<sup>®</sup>

TOPAKUSTIK-R **NEW!**

Type R has an irregular grooving pattern that repeats itself systemically every 128 mm. Two (Type Duo) or even three (Type Trio) differently grooved planks increase the irregularity, especially when its assembly happens randomly. On panels, the grooving repeats itself only every 592 mm, which would not be noticed.

|            |      |      |      |
|------------|------|------|------|
| RL3 -7,4 % | α w  | Euro | NRC  |
| 226 mm     | 0.79 | B    | 0.81 |
| 66 mm      | 0.82 | C    | 0.84 |

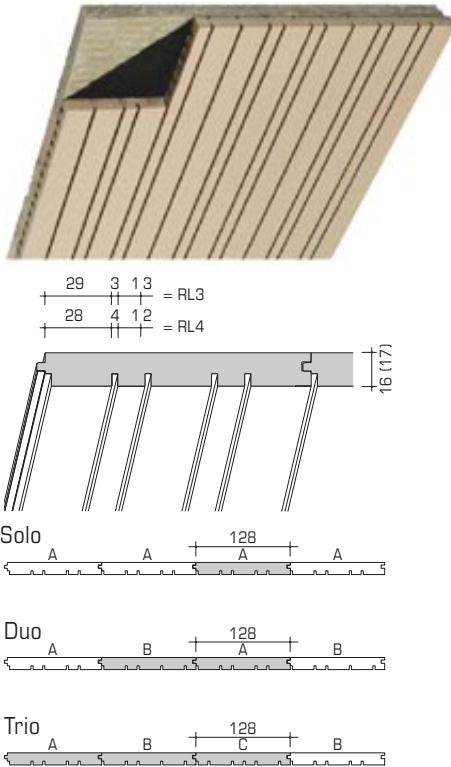
  

|            |      |      |      |
|------------|------|------|------|
| RL4 -9,4 % | α w  | Euro | NRC  |
| 226 mm     | 0.80 | B    | 0.82 |
| 66 mm      | 0.80 | B    | 0.85 |

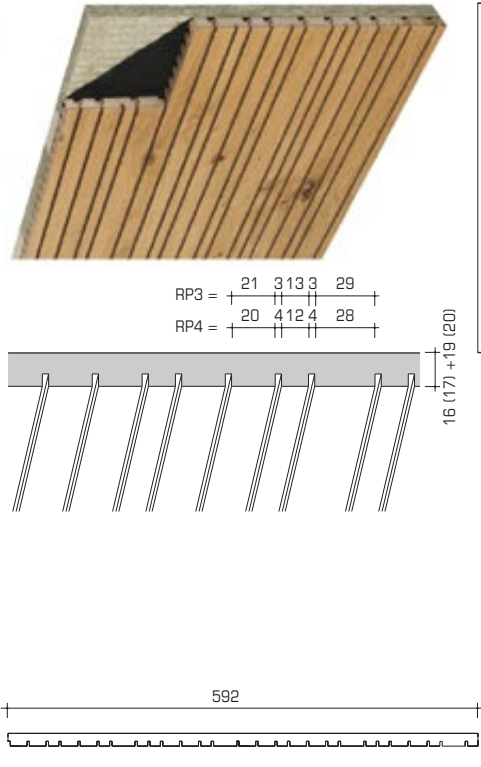
  

|             |      |      |      |
|-------------|------|------|------|
| RP4 -10,7 % | α w  | Euro | NRC  |
| 216 mm      | 0.85 | B    | 0.81 |
| 56 mm       | 0.85 | B    | 0.84 |

R-Planks



R-Panels



10 Theater Agora, Lelystad NL – Architect: UNStudio, Amsterdam NL 11 EPFL, Lausanne CH – Architecte: Richter-Dahl Rocha & Associés architectes SA, Lausanne CH – Photo: EPFL, Lausanne

12 Family Lodge + Spa, Melchsee-Frutt CH – Architect: Architekturwerk AG, Sarnen CH – Photo: Sibylle Kathriner Fotografie, Stans CH



TOP(A)K(U)S(T)I(K)<sup>®</sup>

ARIA-Plus

The perforation is barely visible thanks to the deep grooving and the black MDF board. The grooves create the effect of individual bars. The product can be promoted as no added Formaldehyde.

| Core board size | Topperfo panels     | Topakustik planks   |
|-----------------|---------------------|---------------------|
| 4080 × 2050 mm  | ideal 2020 × 640 mm | ideal 4080 × 128 mm |

Surfaces: see page 17



Spruce Hardwood – picture shows 65 × 25 cm



White Fir, finger – jointed-picture shows 65 × 25 cm

13 Living room, Gonten CH – Architect and Photo: Roland Koch Innenarchitektur, Gonten CH

14 Pan Zentrum, Berlin DE – Architect: Parmakerli-Fountis Gesellschaft von Architekten mbH,

TOP(A)K(U)S(T)I(K)<sup>®</sup> + TOP(P)E(R)F(O)<sup>®</sup>

ARIA-Pure **NEW!**

ARIA-Pure means silver fir through and through! We have the finger-jointed 3-layer silver fir plywood in stock in two 16 mm-thick formats.

| Core board size | Topperfo panels                            | Topakustik planks   |
|-----------------|--------------------------------------------|---------------------|
| 4080 × 2050 mm  | ideal 2020 × 640 mm<br>max. 4050 × 1216 mm | ideal 4080 × 128 mm |
| 5000 × 2050 mm  | ideal 2490 × 640 mm                        |                     |

ARIA-Pure can also be made of common retail 3-layer plywood boards in spruce or other kinds of wood – simply ask us!

For ceilings, glazed surface treatment provides protection against yellowing;  
for walls, we recommend an additional coat of water-based paint.  
Other glazed paint finishes in various colours are also available.



ARIA-Pure  
Topakustik RL3  
see page 15

ARIA-Pure  
Topperfo-Micro  
see page 30

ARIA-Pure  
Topperfo-M 16/16/6  
see page 36

Kleinmachnow DE – Photo: Allard van der Hoek, Amsterdam NL

15 Gotthard Autobahn Raststätte, Erstfeld CH – Architect: architektur lischer partner ag, Luzern – Photo: Roger Frei, Zürich





## MEDIUM DENSITY FIBREBOARD (MDF)

TOPAKUSTIK and TOPPERFO products are manufactured from medium density fibreboard (MDF) as a standard. Thanks to the homogeneous structure, MDF is well suited for this application. MDF panels are produced from soft and hard wood fibers with added binding agents. Only panels meeting the international emission values E1 are processed. Panels are also available in No added Formaldehyde and FSC certified upon request.

### FIRE STABILITY ACCORDING TO EUROCLASS EN 13501-1



TOPAKUSTIK and TOPPERFO have successfully passed extensive tests in accordance with Euroclass EN 13501-1 and are classified as follows in the flame-retardant specification: **B-s2,d0**

| Table of Classification |     |          |    |
|-------------------------|-----|----------|----|
| CH                      | DIN | EN       | US |
| RF 1                    | A1  | A1-s1,d0 | A  |
| RF 1                    | A2  | A2-s1,d0 | A  |
| RF 2                    | B1  | B-s2,d0  | A  |
| RF 3                    | B2  | D-s2,d0  | C  |

as an indication

US classifications according to ASTM E84 standard

#### This code comprises the following value:

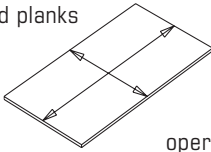
- B little or no contribution to the spread of fire
- s2 little or insignificant smoke emission
- d0 no flammable particles or drops in the event of a fire

#### The system is broken down into the following categories:

- A1 no contribution to the spread of fire
- A2 no significant contribution to the spread of fire
- B little or no contribution to the spread of fire
- C limited contribution to the spread of fire
- D contributor to the spread of fire
- E major contributor to the spread of fire

### EXPANSION AND CONTRACTION OF THE CORE MATERIALS:

Wooden materials are hygroscopic and have a balancing effect on the relative humidity of the room. Changing room humidity also causes the shrinkage and expansion of wooden materials. In air conditioned rooms the panel and plank dimensions can change by +/- 1 mm per 1000 mm. In non air conditioned rooms this can increase to +/- 2 mm per 1000 mm. Therefore panels and planks should be separated with joints of 3 mm to 6 mm depending on their size.



Acclimatise:  
The installation should only be done when the normal operating humidity and temperature conditions are in place. The elements are to be acclimatised inside the installation room 3–4 days before installation. Take care elements are exposed evenly to the room air. For more detailed information, please consult the «guidelines for TOPAKUSTIK and TOPPERFO» in the installation manual.

### CONTENT OF UREA-FORMALDEHYDE

We only use class E1 panels or panels glued without any addition of urea formaldehyde whatsoever. An overview of the panels we use is provided here.

| Finish                    | No add. urea formaldehyde | Class E1         |
|---------------------------|---------------------------|------------------|
| Veneered                  | On request                | Products         |
| Colour or white lacquered | Standard products         | Special products |
| Eco (melamine finish)     | Standard products         | Special products |



TOPAKUSTIK, with MDF fibreboard bonded without formaldehyde, has been examined for volatile pollutants as per ISO 1600: it was awarded the best possible classification (A+).



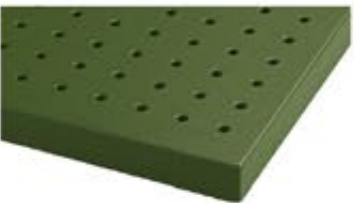
## SPECIAL CORE PANELS

TOPAKUSTIK and TOPPERFO can also be manufactured from other standard core panels. These can be broken down according to requirements with regard to

- Behaviour in fire
- Appearance, e.g. special surface or panel design
- Special properties with regard to stability or moisture

## RESA'P®

RESAP is a non-flammable panel (EN A1-s1, d0/DIN A1/CH RF 1) made from natural gypsum and recycled cellulose fibres.



Painted panels:  
homogenous design – surface and edges can be finished for seamless transition. The RESAP-Plus version is recommended for a largely non-porous coat of paint.



Veneered panels:  
The light-brown/beige colouring of the panel is visible in the grooves or perforations and in combination with oak, beech or light veneers gives a high-quality appearance.

### OVERVIEW OF SPECIAL CORE PANELS

| Core Material designation | Fire category DIN (CH) | Suitable for humid rooms |  |  |  | Basic sizes of core materials | Maximum expansion due to humidity increase for 1000 mm length in air conditioning |
|---------------------------|------------------------|--------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------|
| RESAP®                    | A1 (RF 1)              | –                        | +                                                                                     | +                                                                                     | –                                                                                     | 3080 × 1250                   | 0.4 mm/1 m = 0.4%                                                                 |
|                           | EN A1-s1, d0           |                          |                                                                                       |                                                                                       |                                                                                       |                               |                                                                                   |
| Cement                    | A2 (RF 1)              | +                        | –                                                                                     |  | –                                                                                     | 2600/3100 × 1250              | 0.8 mm/1 m = 0.8%                                                                 |
| Particle board            | B2 (RF 3)              | –                        |  |  |  | DIV                           | 0.8 mm/1 m = 0.8%                                                                 |
| Flakeboard OSB            | B2 (RF 3)              | ~                        | –                                                                                     |  | –                                                                                     | DIV                           | 0.8 mm/1 m = 0.8%                                                                 |
| Forex                     | B1 (RF 2)              | +                        | –                                                                                     |  | –                                                                                     | 3050 × 1220                   |                                                                                   |
| Plywood                   | B2 (RF 3)              | ~                        | +                                                                                     |  | –                                                                                     | DIV                           | 0.8 mm/1 m = 0.8%                                                                 |
| Blockboard                | B2 (RF 3)              | ~                        | –                                                                                     | ~                                                                                     | –                                                                                     | DIV                           |                                                                                   |

Legend:  
– unsuited  
+ well suited  
 upon request  
~ conditionally suited, take differences in colour in untreated panels into account  
DIV various further formats, please inquire.

Explanations:  
 Wood veneer p. 20  
 Paint p. 21  
 Melamine p. 21

### FOR EXAMPLE: BLACK MDF



Black or coloured MDF core boards offer many interesting possibilities. They contrast well with both painted and wood veneer TOPAKUSTIK planks or panels.

When the core is the finish: All of the core panels are industrially manufactured. Colour differences, even within one production batch, cannot be avoided. The application of a topcoat can make these differences even more apparent.



WOOD VENEERED SURFACES:

The TOPAKUSTIK products are veneered in all customary types of wood. The veneer are processed individually for each order. This helps to obtain the most even appearance possible for colour and pattern. Furthermore, the veneer appearance is influenced by the cut and the composition of the veneers. Since wood is a natural product, the matching of the veneer must be done in connection with each individual order.



Oak Europe



Knotty Oak



Maple Europe



Maple US



Birch



Ash



am. Nut Tree/Walnut



Cherry US

... and many other types of wood  
You can use our configurator to choose your veneer and perforation. The effect can be seen immediately.  
See [www.topakustik.com](http://www.topakustik.com)



Collection 19-9  
( subject to a nominal charge )  
19 coloured natural wood veneer and  
9 Natural wood veneer



Quarter cut + half crown cut



Random matched



Quarter cut slip matched



Quarter cut book matched



Crown cut slip matched



Crown cut book matched

**Advantage:** uniform impression for whole project

**Disadvantage:** not uniform impression for whole project

**Different lengths of planks and panels:**  
The choice of the veneers is tailored to the length of the plank or panel. Different veneers may be used for various lengths. If the entire project needs to be manufactured using the same veneer, that needs to be specified as a condition.

**Rift veneers (sliced veneers or true quarters) on panels:**  
joining rift veneers on the bias is not advisable with certain types of wood such as maple or cherry as the appearance of the veneers becomes striped. We recommend random match veneering = our 'Random matched' range.

VARNISH:

A high quality, clear, flat varnish is provided on all orders unless otherwise specified. Light kinds of wood such as maple or birch are varnished with a slight lightening effect as a matter of principle.

- NM = natural, gloss varnish
- AM = lightening, gloss varnish



PAINT SURFACES

Matching is available for any manufacturer's colour specification (RAL/NCS/...). The application is done with the latest generation spray robotics, providing a guaranteed even application. Due to the grooves and perforations of the products, the colour appearance is different from that on smooth surfaces. If TOPAKUSTIK products are finished by the client, please remember that an even paint application, even in the grooves, is absolutely necessary for a good final result.



The advantage of painted surfaces is that the grooves are also the same colour.



White coating in MDF-eco melamine gives the grooves greater prominence.



MELAMINE (eco)

- Details for eco:
- 10 different cutting-edge Decors
  - All panels are classified as no added urea formaldehyde NAUF
  - Short delivery times, all decors in stock NH
  - Both fire classes available D-s2,d0 and B-s2,d0 (FR)
  - FSC mix possible on request (depending on quantity)

**basic:** 4100 × 2070 mm 5600 × 2070 mm



Oak M3280 NTL



Maple M2106 SMA



Beech M112 SMA

**extra:** 4100 × 2070 mm



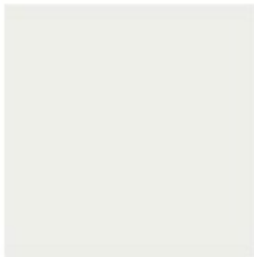
Cherry M760 SMA



Walnut M4462 SMA



Ash M3965 NTL



White B3002 LP



Silver L4068 LP



Acacia M4451 NTL



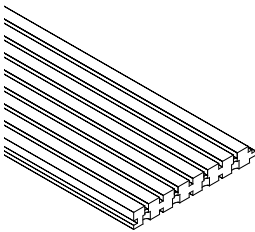
Thermo M6222 NTL



**eco plus collection:** Further melamine finishes for quantities above 150 m² upon request.

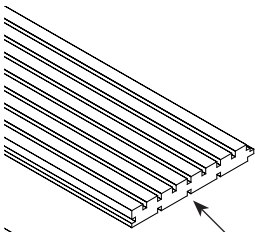
**HPL coating:** All customary HPL laminate coatings are possible. Contact the factory for details.

EDGES

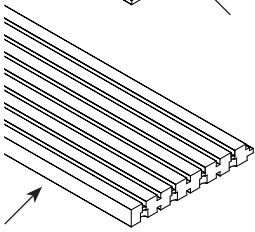


TOPAKUSTIK-planks edge details:

Longitudinal edges with tongue and groove.  
If requested an extra groove can be inserted for fitting with a mounting clip.  
Transverse edges are cut industrially and at a 90 degree angle. When planks of multiple lengths are requested, the perforations are visible on the front edge.



If requested, perforations on the transverse edges are set back. Edge varnished.  
The rear stress relief grooves are necessary for stability and are visible.



If requested, the first and last plank may have a visible edge without tongue or groove.  
It may also be veneered or painted.

!

**Product tolerances**

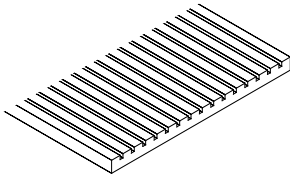
**Planks:** the front edges of TOPAKUSTIK planks are supplied with a industrial 90 degree angle cut as a standard. The length tolerance amounts to +/- 3mm. If requested, the planks can be supplied to a «fixed» dimension with a reduced tolerance of approx. +/- 0.25mm per m<sup>1</sup>. This is only recommended for lengths shorter than 2 m because of the potential for greater expansion and contraction of core materials.

**Panels:** TOPAKUSTIK panels are produced on computer controlled machinery with tolerances of +/- 0.5 mm per m<sup>1</sup>).

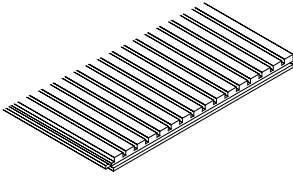
TOPAKUSTIK products are delivered with small tolerances as above. By grooving and perforating, the surface area is increased by a factor of two or three, depending on the design. Therefore TOPAKUSTIK products can react quickly to varying humidity and temperature conditions. Size differences can occur before installation caused by expansion and contraction of core materials during storage and acclimatization.

(> page 18)

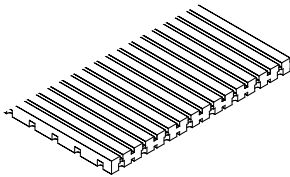
TOPAKUSTIK-Panels edge details:



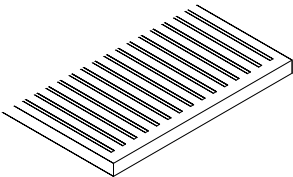
Visible edge, perforation set back  
(Edge finished in coloured paint version!)



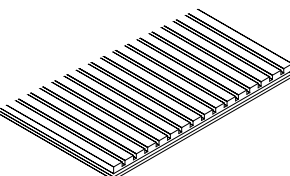
4 mm tongue or groove joint  
– Panel joints need to be shown



For blind edges, perforations are visible

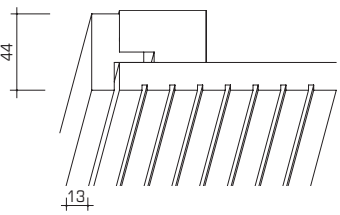


Groove interrupted at edge

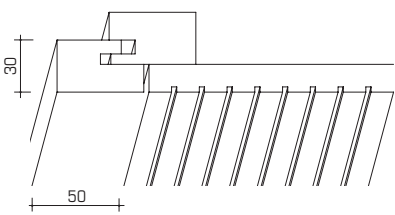


Female rabbet joint 4 mm deep for a spline joint

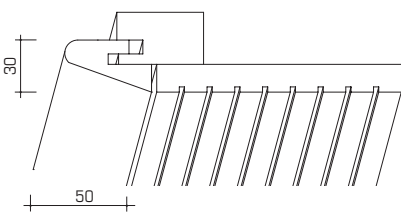
CEILING FINISHES FOR PLANKS + PANELS



Edge Moulding Type 1

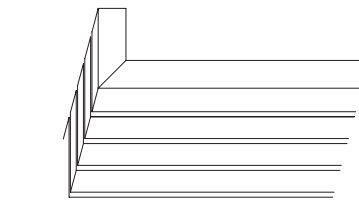


Edge Moulding Type 2

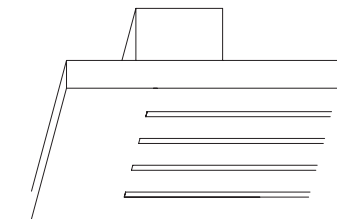


Edge Moulding Type 3

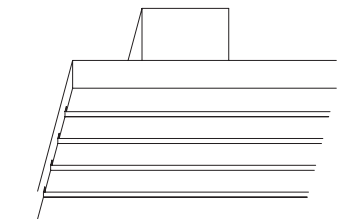
CEILING FINISHES FOR PANELS



Mitre Type 10



Visible Edge with Grooves set back  
Type 11



Visible Edge with continuous grooves  
Type 12

CUTOUTS



On site or factory cut

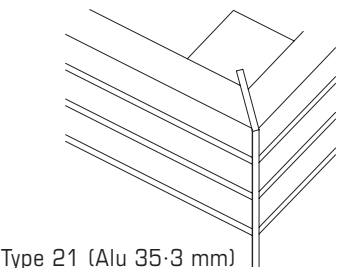


Produced with interrupted grooves

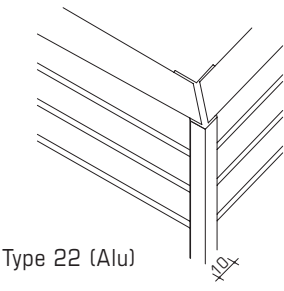


Inserts for planks  
128/256/384 mm

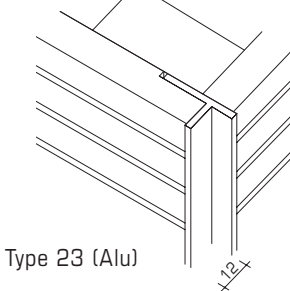
WALL CORNERS AND TERMINATIONS



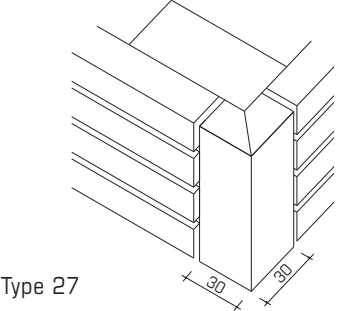
Type 21 (Alu 35·3 mm)



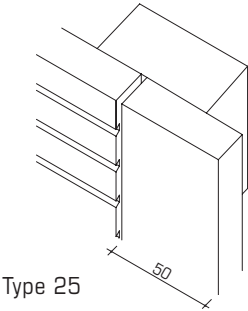
Type 22 (Alu)



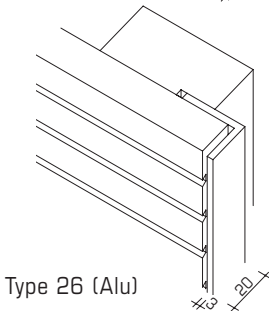
Type 23 (Alu)



Type 27



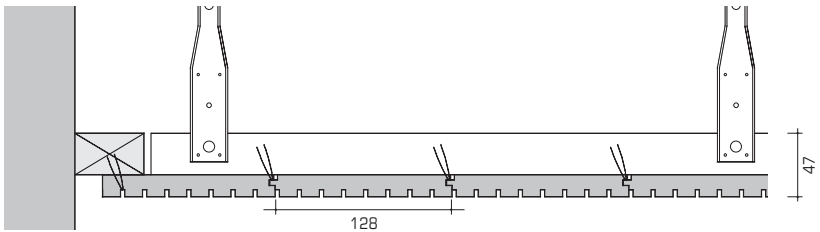
Type 25



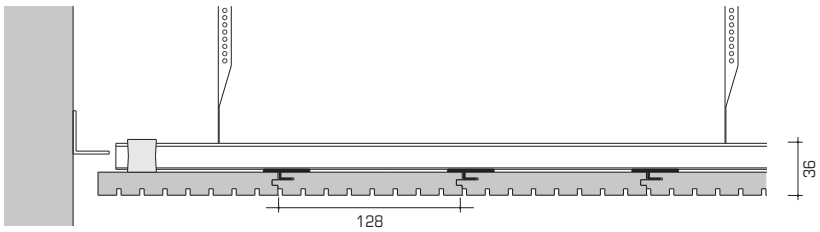
Type 26 (Alu)

MOUNTING OF TOPAKUSTIK PLANKS

Planks are manufactured with a precise large notch finger joint ,which permits a plain ceiling design. However, individual planks or joints may be visible, in particular if dark colours or shiny varnishes are used. The planks are installed without dilation joint, which is only possible because of the narrow plank width of «just» 128mm. However, it is mandatory to observe the installation rules regarding room climate – see page 18!



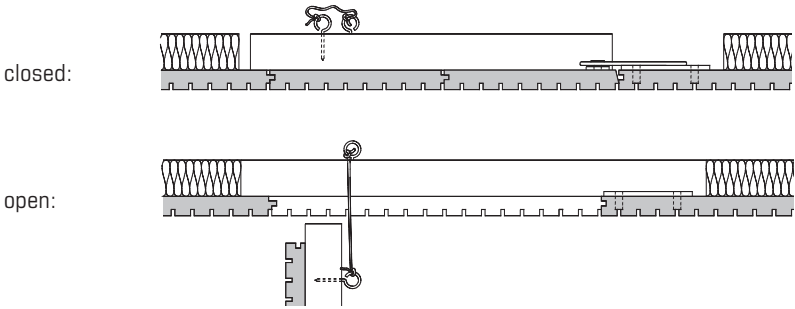
**Mounting on wooden Battens:** The TOPAKUSTIK planks are installed like conventional tongue and groove planks. It is important that compressed air pressure used for the nailing or stapling gun is set precisely, so the staples do not protrude in the groove or penetrate too deeply.



**Mounting on Metal Ceiling Grids:** The TOPAKUSTIK plank is fitted to the suspended H-bar rail with special «twist on» mounting clips. This form of assembly is ideal for non-flammable ceiling finishes.

Narrow grooving (Typ 6/2, 8/3, 9/2) is not suitable for this system

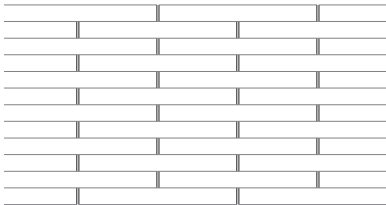
ACCESS PANEL



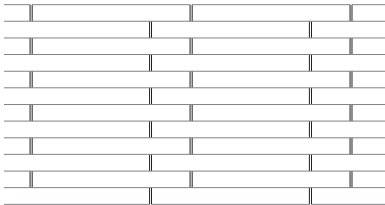
LAYOUT

**Offset joints:** The installation with offset joints permits a slight material expansion without it becoming visible. In combination with joint widths of about 3 mm, a clear and tidy joint appearance results.

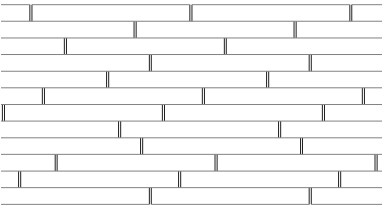
English



Serrated

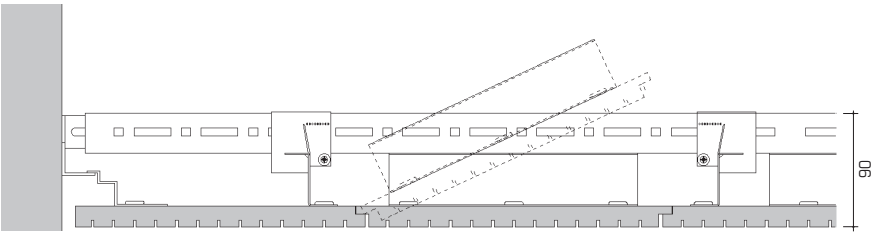


Random

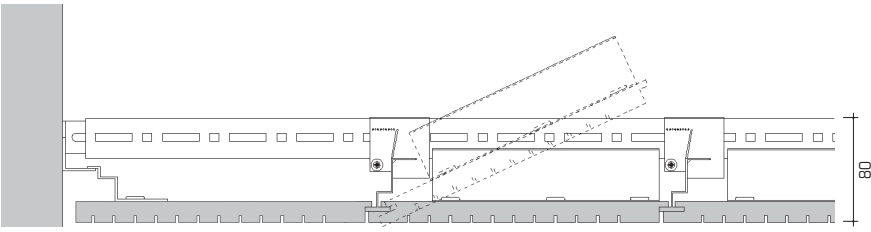
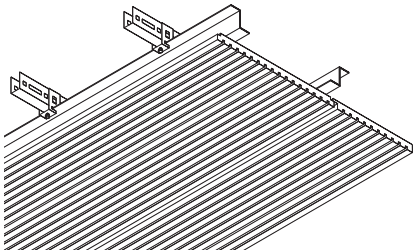


MOUNTING OF TOPAKUSTIK-PANELS

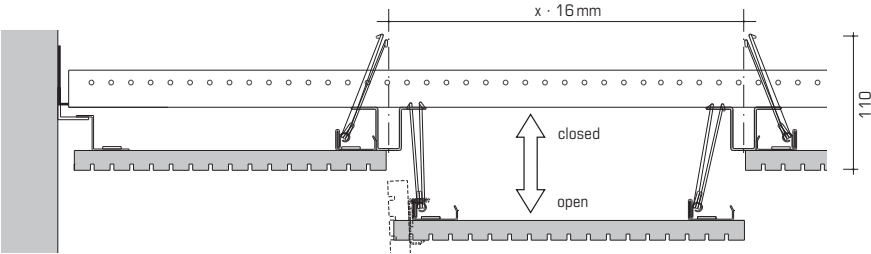
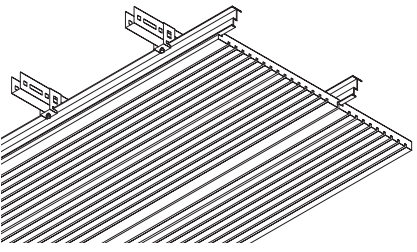
Joints also have a disassembly function and as a general rule they should have twice the width of the slot on the panel...i.e. 14/2M should be a 4 mm joint and 13/3M, a 5 mm or 6 mm joint. It is extremely important to observe the installation rules regarding room climate – see page 18!



**Z-System:** Every other panel is inserted and can easily be removed by lifting. This system is suitable for all ceilings.  
Panel joints : appr. double width of grooves (2 = 4, 3 = 5, 4 = 6 mm)  
Recommended width of panel 640 mm (axe incl. joints = 642/643/644 mm)

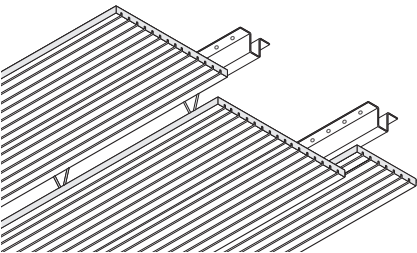


**G-System:** Each panel is easy to remove by lifting.  
Panel joints : appr. double width of grooves (2 = 4, 3 = 5, 4 = 6 mm)  
Recommended width of panel 640 mm (axe incl. joints = 642/643/644 mm)



**S11:** Each panel is easy to remove.  
Recommended width of panel 640 mm incl. joint\* (multiple of 16 mm)  
\* Panel joints : appr. double width of grooves (2 = 4, 3 = 5, 4 = 6 mm)  
Max. panel length = 2510 mm

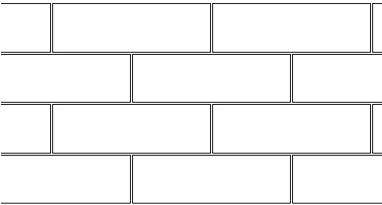
Narrow grooving (Type 6/2, 8/3, 9/2) is not suitable for the system S11



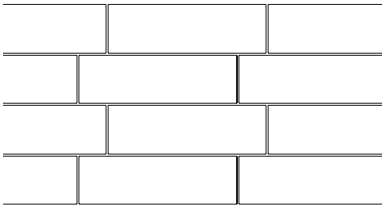
LAYOUT

**Offset joints:** The installation with offset joints permits a slight material expansion without it becoming visible. In combination with joint widths of about 3 mm, a clear and tidy joint appearance results.

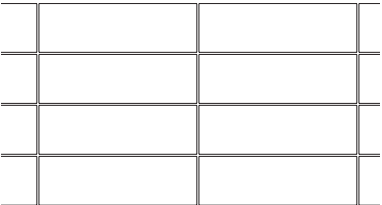
English



Serrated



Parallel –  
Not recommended for G-System



# ... SMALLER AND SMALLER!

For a long time, high sound absorption was equated with large open areas that also entailed large perforations. However, architects and designers wanted, and still want, to make the perforations less visible. Following the launch of our TOPPERFO-T and TOPPERFO-Clou products with smaller perforations, we have now achieved hole diameters of a mere 0.5 mm or even 0.3 mm with our TOPPERFO-Micro range. In other words, the circle has been squared: small perforations and high sound absorption combined in one and the same product!



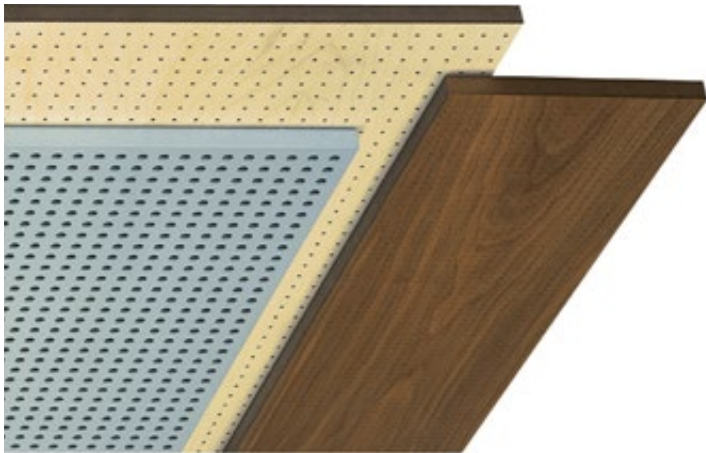
*Living room, Küsnacht am Zürichsee CH  
Architect: Sybille Cartier Vogt, Erlenbach – Photo: Sibylle Kathriner Fotografie, Stans  
Product: TOPPERFO-Micro 2/2/0.5, white lacquered*

The ceiling cladding in this family home on Lake Zurich exudes cool elegance. The neutral ceiling surface enhances the tasteful decor rather than competing with it. The functioning of the room acoustics is virtually invisible.

# TOP(P)E(R)F(O)®

TOPPERFO are perforated acoustic panels tailor made specifically for each project. Various panel sizes and hole diameters are available for selection. TOPPERFO-Micro and TOPPERFO-Clou, developed by NH, are discrete in their appearance and simultaneously very effective in sound absorption thanks to the small hole diameters. TOPPERFO panels can be provided with various edge designs.

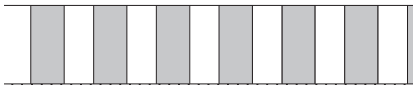
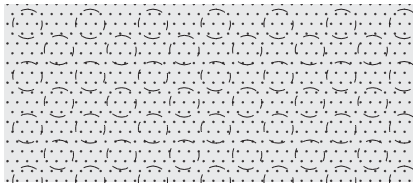
Large perforation diameters may be problematic due to the strong light and dark contrast > risk of flickering!  
Recommendation: use fine perforations for wall panels (TOPPERFO-T, -Clou or -Micro).



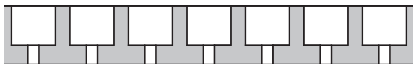
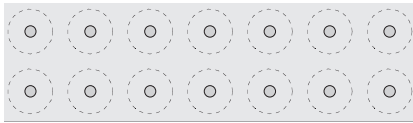
## THE ACOUSTIC SYSTEM

All TOPPERFO types are available with M and T perforations on the rear. This makes it possible for acousticians to match the TOPPERFO surface treatment with the required absorption. The absorption coefficients stated in this brochure were measured according to the ISO 354 standard as described previously. Additional absorption coefficients with other porous materials in the air cavity (e.g. only fleece, melamine resin foam, fiber-glass, etc.) are listed in the TOPAKUSTIK/TOPPERFO sound absorption document.

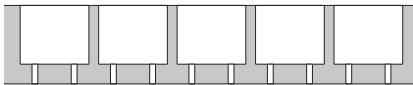
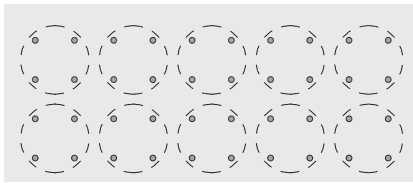
**Micro Perforation** delivers convincingly high sound absorption – but it can't be seen! The core panel is fully perforated and the covering, veneer or coating material is micro-perforated. TOPPERFO-Micro is suitable for almost all areas, except for outdoor applications.



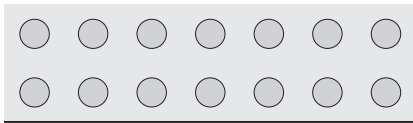
**T-Perforation:** For absorption in the low to medium frequency range. The absorption in the low-frequency range is based on the combination of small diameter holes on the visible side and larger diameter holes on the rear. The small perforations present an aesthetic surface suited for wall finishes.



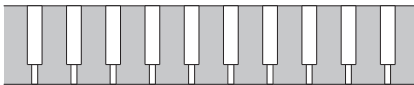
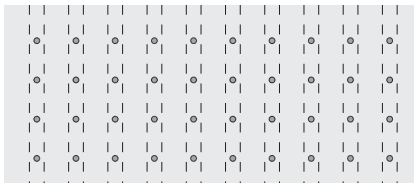
**Clou Perforation** in core panels with normal flammability. Developed on the basis of T-Perforation, our Clou Perforation product features even smaller bore diameters, starting at 1.2 mm. The sound energy is channelled through four bores on the visible side into one larger bore on the rear side. Materials other than MDF can also be used for core panels.



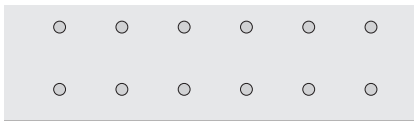
**M-Perforation:** For absorption in the medium to high frequency range. The absorption depends on the percentage open area, the depth of the rear air cavity between the acoustic elements and the ceiling or wall and the porous absorption in the cavity.



**Clou Perforation** in low-flammability or non-flammable core panels. The bore on the rear side is replaced by a groove that has a slight influence on the absorption values – note the measurements. The perforation on the visible side remains the same on low-flammability panels; the minimum diameter for non-flammable core panels is 2 mm.



**Reflector:** TOPPERFO products can also be used as reflectors by eliminating the perforations on the rear surface. The absorption figures are then equivalent to those of a standard reflecting panel.



## DIMENSIONS AND MATERIALS



PANELS (Planks see page 42)

| Core panel         | not fire rated D-s2,d0 (DIN B2) |                         |                           | fire retardant B-s2,d0 (DIN B1) |                           |                           | non-flammable           |                         |
|--------------------|---------------------------------|-------------------------|---------------------------|---------------------------------|---------------------------|---------------------------|-------------------------|-------------------------|
| Surface/ Thickness | Paint 16 mm                     | Wood Veneer 17 mm       | Melamine 16 mm            | Paint 16 mm                     | Wood Veneer 17 mm         | Melamine 16 mm            | Paint 16 mm             | Wood Veneer 17 mm       |
| Panels             | max. in mm 3648 × 1216          | max. in mm 3648 × 1216  | max. in mm 3648 × 1216    | max. in mm 3648 × 1216          | max. in mm 3648 × 1216    | max. in mm 3648 × 1216    | max. in mm 3080 × 1216  | max. in mm 3080 × 1216  |
|                    | ideal: in mm 2032 × 992         | ideal: in mm 2032 × 992 | ideal: in mm 2032×992/640 | ideal: in mm 2032×992/640       | ideal: in mm 2032×992/640 | ideal: in mm 2032×992/640 | ideal: in mm 1540 × 608 | ideal: in mm 1540 × 608 |
|                    | 2780 × 992                      | 2780 × 992              | 2780×992/640              | 2780×992/640                    | 2780×992/640              | 2780×992/640              | 2540 × 608              | 2540 × 608              |
|                    | 3648 × 640                      | 3648 × 640              |                           |                                 | 3640 × 640                |                           | 3080 × 608              | 3080 × 608              |

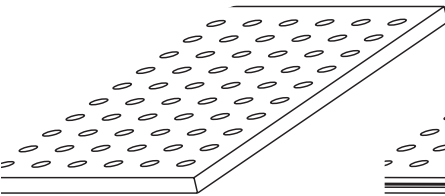
ideal means optimal use of MDF core – custom lengths are also available  
Date 2019 – please check the current dimensions on [www.topakustik.com](http://www.topakustik.com)

Fire category – more information page 18/19

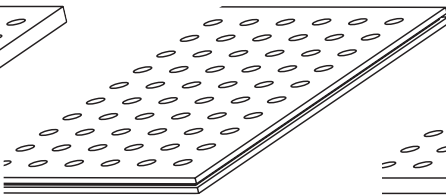


page 20/21

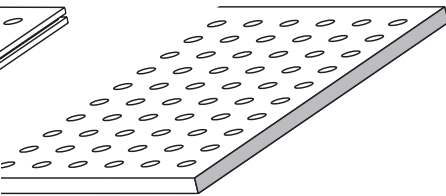
## EDGES



Clean cut



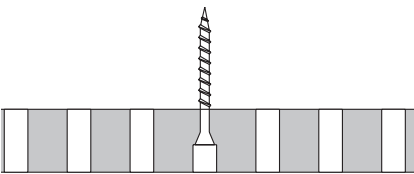
With surrounding groove and tongue



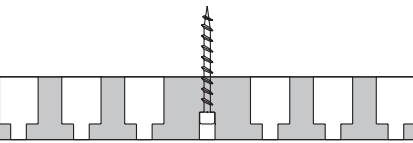
Visible edge

... or according to your specifications

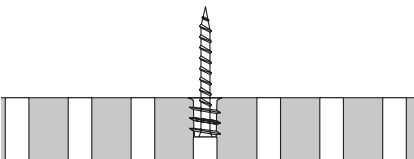
## MOUNTING



TOPPERFO-M, Ø 6 mm  
Special screws: in half depth «dummy» perforations



TOPPERFO-T, Ø 4 + 5 mm  
Special screws: in half depth «dummy» perforations



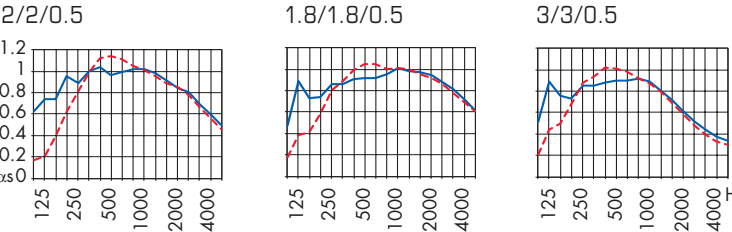
TOPPERFO-M, Ø 8 mm  
With insert from rear side



See installation manual!

TOP)P)E)R)F)O)®-Micro

With TOPPERFO-Micro, the sound absorption function becomes almost completely invisible. The perforation measures a mere 0.5 mm (or even 0.3 mm), so it is virtually invisible from a certain distance. TOPPERFO micro-perforation is available in various grids and diameters, depending on the required level of sound absorption. The choice of surface coverings is also virtually unrestricted. All veneers and paint colours are available, as well as CPL and HPL surfaces by arrangement.



TOTAL THICKNESS  
— ca. 226 mm  
- - - ca. 66 mm  
More information Page 4

| αw      | Euro | NRC  |
|---------|------|------|
| 0.80 L  | B    | 0.93 |
| 0.75 LM | C    | 0.95 |

| αw   | Euro | NRC  |
|------|------|------|
| 0.90 | A    | 0.93 |
| 0.90 | A    | 0.95 |

| αw      | Euro | NRC  |
|---------|------|------|
| 0.60 LM | C    | 0.81 |
| 0.55 LM | D    | 0.84 |

The micro-perforation is provided in fields with a width of around 150 mm. In sided light, it is possible that the excess length between the individual fields becomes visible on UniEco decors or if a dark colour varnish is used. The grid 1.8/1.8 is therefore not recommended for these surfaces. For a grid of 2/2, we recommend to provide samples.

NEW!  
MICRO-DIRECT



Micro-perforation for almost all boards! We transform industrially manufactured boards "directly" into a sound absorber! For example:  
- Melamine-coated boards – see our Eco collection, page 21  
- Branchless three-layer or solid boards – see support plate, page 17  
- MDF boards veneered by a joinery (> 800 x 300 mm)  
- painted MDF boards with colour... and many more

MICRO-GRAPHIC



Graphic designs and patterns are available in every imaginable form. Would you like a portrait, or do you prefer an abstract pattern? The possibilities are virtually limitless. The back cover of this brochure shows a project featuring an abstract pattern.

16 Galerie Lafayette, Paris FR – Architect/Photo: CALQ Architecture, Paris FR 17 Kantonsspital, Luzern CH – Architect: Schärli Architekten, Luzern CH – Photo: Kantonsspital, Luzern CH



18 Ericusspitze, Hamburg DE – Architect: Henning Larsen Architects, Copenhagen DK – Photo: Anke Müllerklein, Hamburg DE

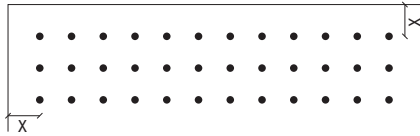
TOPPERFO®-Clou

The fine Clou perforation in an 8 mm grid with a diameter of only 1.2 mm can hardly be seen at a distance. The wooden texture is therefore completely retained in its natural beauty.

|                    | rear       | 8/8      | 6,4/6,4  | 5,3/5,3 |
|--------------------|------------|----------|----------|---------|
| MDF not fire rated | perforated | Ø 1.2 mm | Ø 2.0 mm |         |
| MDF fire retardant | grooved    | Ø 2.0 mm |          |         |
| Resap              |            |          |          |         |

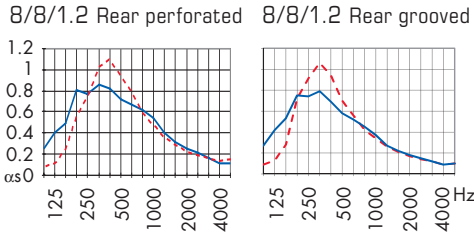
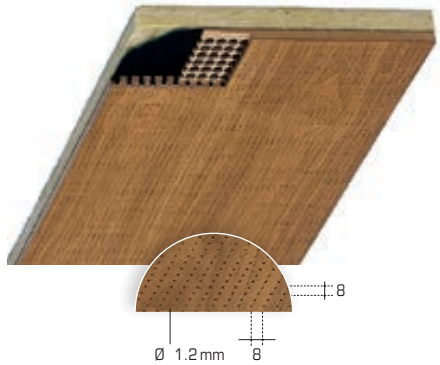
Clou perforation is provided over the whole surface to add the benefit of a shine. The middle of the last perforation row should therefore be at the following distance from the board edge:

Grid 8/8            x = max. 6,5 mm  
Grid 6,4/6,4        x = max. 5,0 mm  
Grid 5,3/5,3        x = max. 4,0 mm



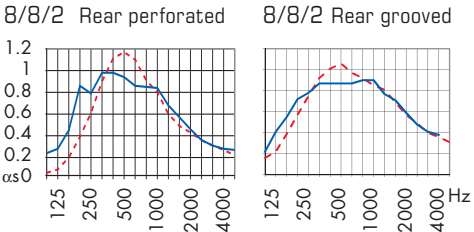
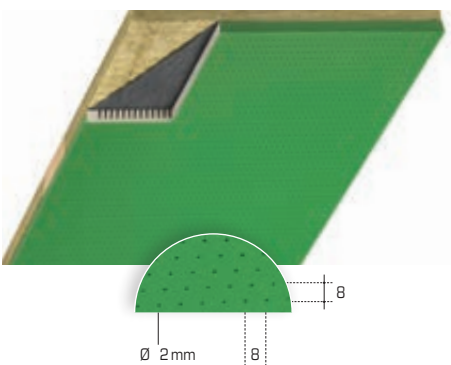
TOTAL THICKNESS  
— ≈ 226 mm  
- - - ≈ 66 mm  
More information Page 4

8/8/1.2



| αw      | Euro | NRC  | αw      | Euro | NRC  |
|---------|------|------|---------|------|------|
| 0.30 IM | D    | 0.57 | 0.25 IM | E    | 0.47 |
| 0.30 IM | D    | 0.60 | 0.25 IM | E    | 0.52 |

8/8/2



| αw      | Euro | NRC  | αw      | Euro | NRC  |
|---------|------|------|---------|------|------|
| 0.45 IM | D    | 0.76 | 0.45 IM | D    | 0.79 |
| 0.45 IM | D    | 0.75 | 0.55 IM | D    | 0.81 |

DIGITAL PRINT



TOPPERFO-Clou and -Micro is also ideal for printed walls or ceilings. Because the Clou- or Micro-perforation is almost invisible, it does not clash with the printed subject – but the surface still absorbs sound. At the DaVinci College high school in Roosendaal (Netherlands), the pupils' imaginative versions of the Mona Lisa were assembled to create a very unusual collage.

19 Alfa Laval, Denmark DK – Architect: PLH Arkitekter, Copenhagen DK – Photo: Fotograferne, Nibe DK    20 APA Tower, USA – Architect: Gensler, USA – Photo: Keith Trotta, USA



21 Centre scolaire, Salvan CH – Architects: Bonnard & Woelfray, Monthey CH – Photo: Patrick Zufferey, Sierre CH



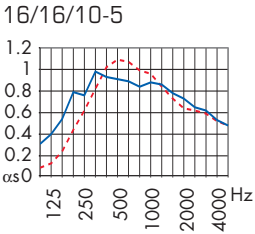
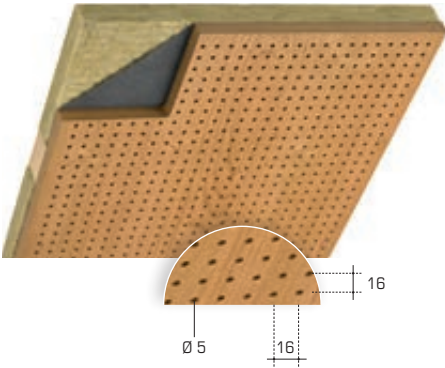
TOP)P)E)R)F)O)® - T

The T-perforation developed and successfully used by NH Akustik+ Design AG has a discreet effect, yet offers appreciable absorption.

TOPPERFO-T panels are available with perforation bores of Ø 3, 4 and 5 mm. Decreasing the diameter of the visible perforations, shifts the absorption maximum to a lower frequency.

See page 29 for dimensions and materials  
See page 20/21 for surfaces

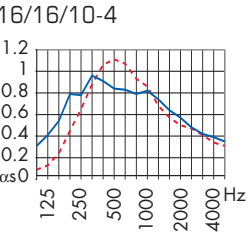
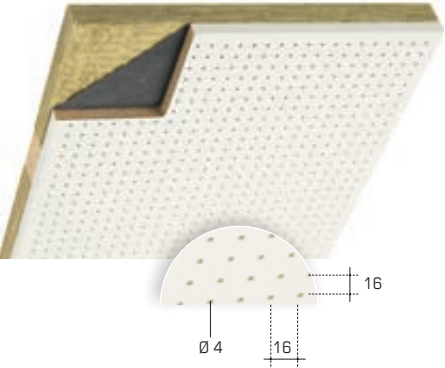
16/16/10-5



| $\alpha_w$ | Euro | NRC  |
|------------|------|------|
| 0.70 L     | C    | 0.82 |
| 0.70 M     | C    | 0.83 |

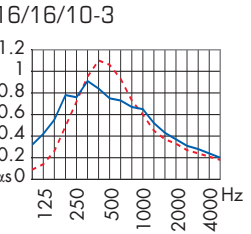
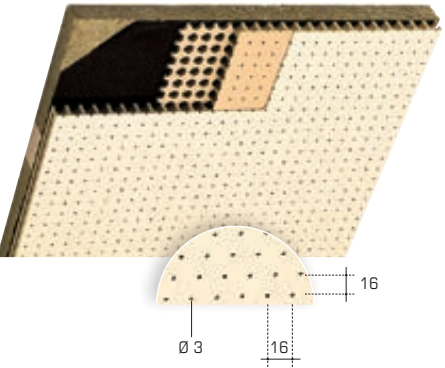
TOTAL THICKNESS  
—  $\approx 215$  mm  
- - -  $\approx 55$  mm  
More information Page 4

16/16/10-4



| $\alpha_w$ | Euro | NRC  |
|------------|------|------|
| 0.55 LM    | D    | 0.75 |
| 0.50 LM    | D    | 0.78 |

16/16/10-3



| $\alpha_w$ | Euro | NRC  |
|------------|------|------|
| 0.40 LM    | D    | 0.63 |
| 0.35 LM    | D    | 0.68 |

22 Swiss Lounge, Flughafen Zürich CH – Architect: Greutmann Bolzer AG für Gestaltung, ZH CH – Photo: Valentin Jeck, Stäfa CH 23 LVM, Münster DE – Architect: HPP Architekten, Düsseldorf, DE – Photo: HGEsch/Hennef, Blankenberg DE 24 Family Lodge + Spa, Smoker Lounge, Melchsee-Fruitt CH – Architect: Architekturwerk AG, Sarnen CH – Photo: Kathriner Fotografie, Stans CH



TOP)P)E)R)F)O)® - M

TOPPERFO-M are acoustic panels in their conventional form in all materials and surfaces. Perforation-free edges and un-perforated borders for cut-outs are available as a client's choice. Other hole spacings and bore diameters are available upon request.

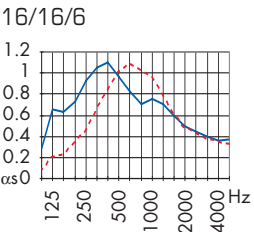
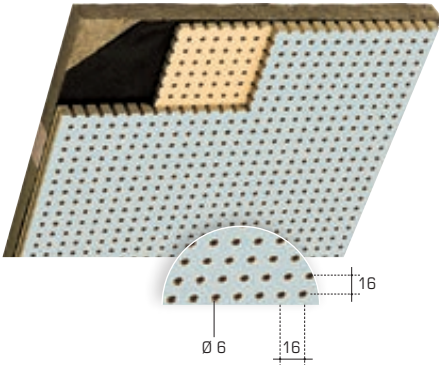
See page 29 for dimensions and materials  
See page 20/21 for surfaces

Hole spacings and bore diameters

| Offset 16/20/40 |    |    |           |         |
|-----------------|----|----|-----------|---------|
| x               | y  | Ø  | open area | ISO 354 |
| 16              | 16 | 6  | 12%       | ✓       |
| 16              | 16 | 8  | 19%       | ✓       |
| 16              | 16 | 10 | 31%       | ✓       |
| 40              | 40 | 10 | 5%        | ✓       |
| 20              | 20 | 10 | 20%       | ✓       |
| 20              | 20 | 8  | 12%       | ✓       |
| 20              | 20 | 6  | 7%        | ✓       |

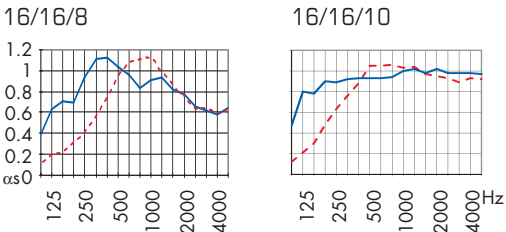
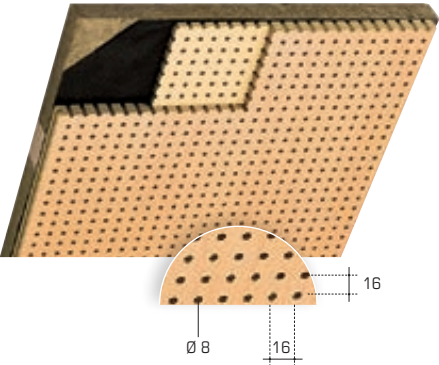
... and many others!

16/16/6



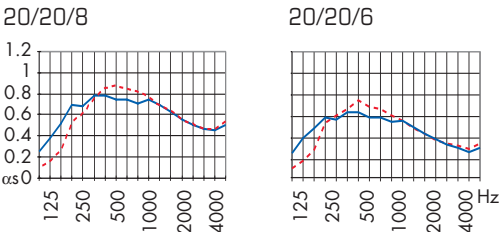
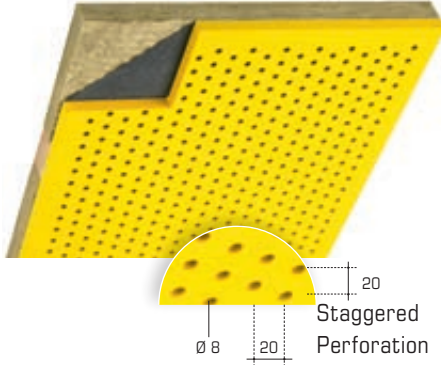
| αw      | Euro | NRC  |
|---------|------|------|
| 0.50 LM | D    | 0.79 |
| 0.50 M  | D    | 0.73 |

16/16/8 (10)



| αw      | Euro | NRC  |
|---------|------|------|
| 0.75 LM | C    | 0.91 |
| 0.70 M  | C    | 0.81 |

20/20/8 (6)



| αw      | Euro | NRC  |
|---------|------|------|
| 0.60 L  | C    | 0.68 |
| 0.60 LM | C    | 0.71 |

TOTAL THICKNESS  
— ≈ 215 mm  
- - - ≈ 55 mm  
More information Page 4

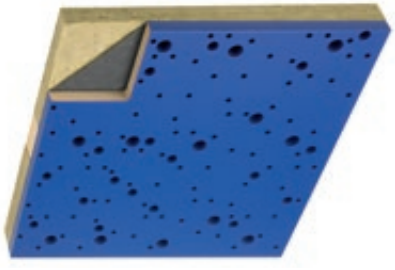
25 Ernst & Young, London GB – Architect: Perkins + Will, London GB – Photo: David Churchill, Hove GB 26 Campus Trivaux Garenne, Clamart FR – Architecte: Le Penhuel Geatan, Paris FR –



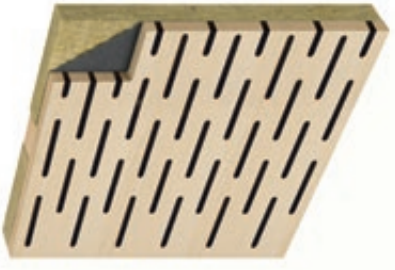
Photo: Sergio Grazia, Paris FR 27 Sporthalle, Niederglatt CH – Architect: L3P Architekten, Regensburg CH – Photo: Vito Stallone, Dottikon CH



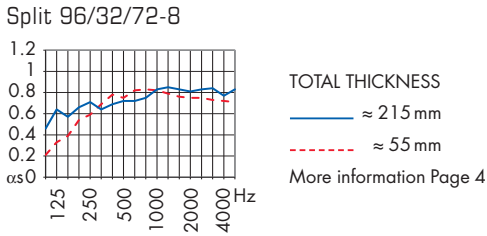
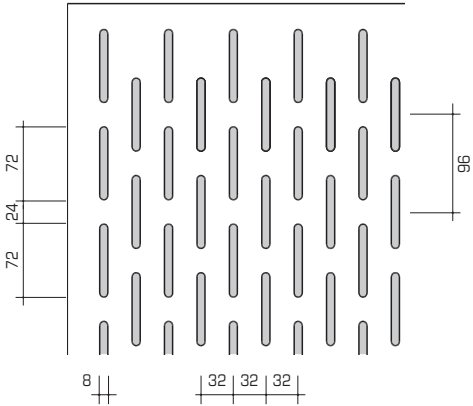
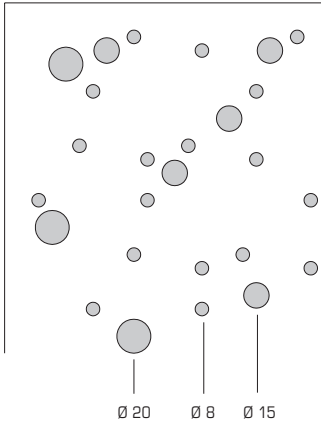
TOP)P)E)R)F)O)® -Bubble TOP)P)E)R)F)O)® -Split



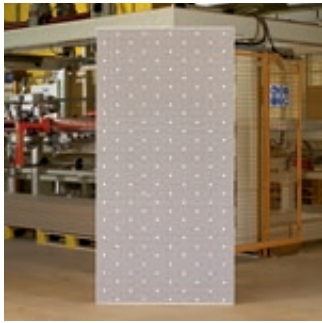
Three different holes



Longitudinal slots



TOP)P)E)R)F)O)® -Graphic



Star 8



Text 8 (or 6)

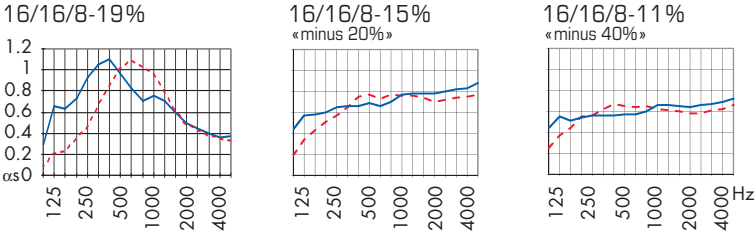


Rain 8



Rollo

**UNO GRAPHIC**  
Individual perforations are exposed to create a graphic pattern. This page shows just a few ideas, but the possibilities are almost unlimited. The only rule: the bore grid of 16 mm must always be observed. Sound absorption values are available for «minus 20%» and «minus 40%» of the perforation.



**GRAPHIC MULTI**  
Multiple bore diameters offer considerably more possibilities, but production is also more complex.

Many other designs under  
[www.topakustik.ch/products/topperfo/graphic](http://www.topakustik.ch/products/topperfo/graphic)

28 Kantonbank Graubünden, Chur CH – Architect: Domenig Architekten, Chur CH – Photo: Feiner Ralph, Chur CH 29 Devon Energy, USA – Architect: Kendall Heaton Architects, Houston

USA 30 Affenhaus, Zoo Basel CH – Architect: Peter Stiner, Basel CH – Photo: Zoo Basel CH



## COLLABORATION

We offer far more than innovative products that bring together architectural materials with acoustical performance. Our strength in systems engineering coupled with the excellent craftsmanship of our fabricators allows us to also bridge invention and reality. We offer time tested engineering and installation strategies for the most unique projects. Early design motifs can be quickly adapted into prototyping for feasibility studies, and our design commitment maintains its endurance through the entire project lifecycle to final commissioning. Our goal is to both encourage creativity and meet its demands.



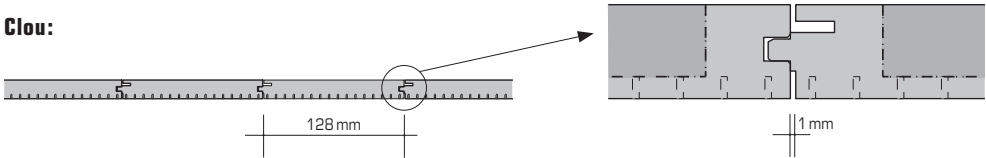
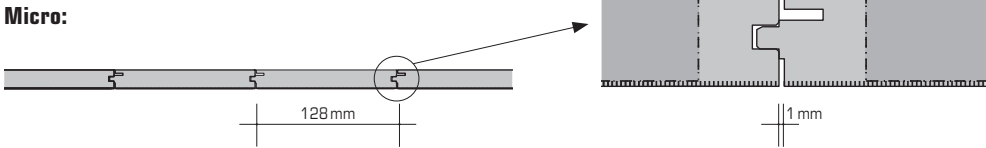
*Falkonergårdens Gymnasium DK  
Architect: Falko Arkitekter, Copenhagen – Photo: Stammers Kontor, Copenhagen  
Product: TOPPERFO-M 16/16/8, Oak veneered*

The extension built onto the Falkonergården high school in Frederiksberg, Denmark, houses a rather unusual gymnasium. The Falko Arkitekter firm created an additional space between two traditional brick buildings, providing accommodation for sports as well as meetings. TOPPERFO panels with a large M-perforation alternating with smooth veneered areas were used for the wall claddings. The installation was slightly curved.



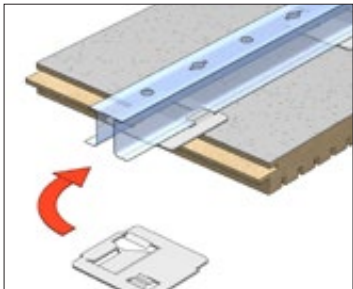
TOPPERFO®-Planks **NEW!**

TOPPERFO planks allow a line effect combined with circular perforation. The length can be chosen as required. All surfaces and fire categories are possible.

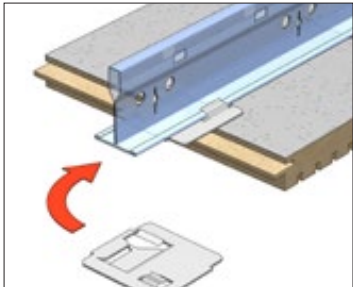


other types of perforations  
or different widths on request

with H-profiles:



with T-profiles:

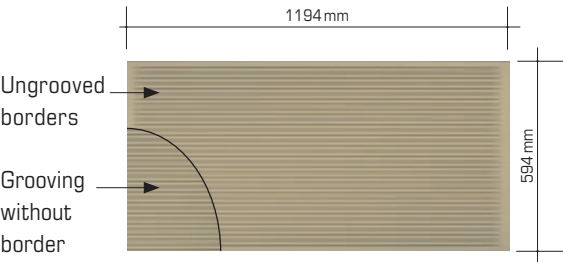
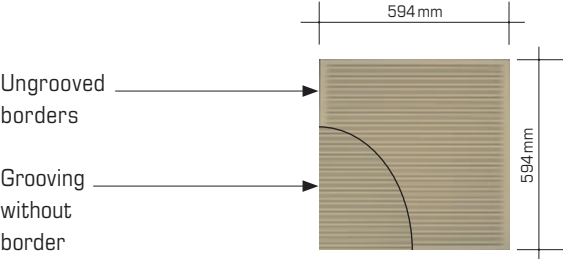


...or with screw clip

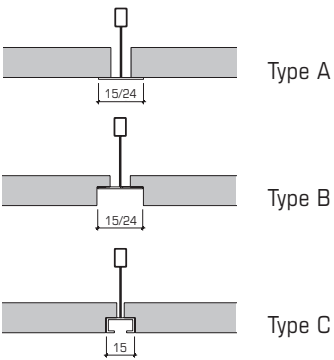
SIXTY-SYSTEM

(US = 2x2 GRID PANELS)

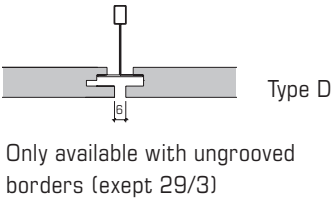
The ceiling system offering maximum choice and extremely easy assembly. Sixty-System 2x2 grid panels fit into all standard T-profiles.



Opening upwards: types A, B and C



Opening downwards: type D



Only available with ungrooved borders (except 29/3)

31 4 Times Square Durst building, New York, USA – Architect: Studios Architecture, New York – Photo: @jeremyfrechette



31

32 Restaurant Compas, Vernier CH 33 TOPAKUSTIK Sixty Typ 29/3 M 34 TOPPERFO Sixty Typ M, 16/16/6



32



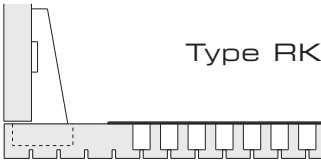
33



34

CABINET FRONTS

Cabinet fronts or rear walls of cabinets can be used as sound absorbers. The following products are most suitable: TOPAKUSTIK 14/2, 19/2, 6/2, TOPPERFO-Micro/-T and Clou.



In conjunction with the fleece attached to the inside (RK 280), the acoustic surface ensures an absorption across the entire frequency band. The fleece developed by NH is tear-proof and set back from the hinges and handles.

→ 3 point-lock must be used!

Topakustik:

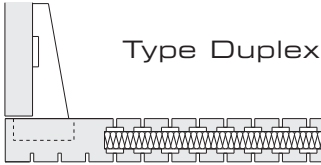
| Type      | αw       | Euro | NRC  |
|-----------|----------|------|------|
| RK 9/2 M  | 0.55     | D    | 0.56 |
| RK 14/2 M | 0.60 (H) | C    | 0.68 |

Topperfo:

| Type             | αw        | Euro | NRC  |
|------------------|-----------|------|------|
| RK Clou 8/8/1.2  | 0.35 (LM) | D    | 0.54 |
| RK Micro 2/2/0.5 | 0.7       | C    | 0.82 |



Door RK inside



Duplex is particularly suited to large hinged or sliding doors. These have invisible, integrated absorptive panels.

→ 3 point-lock must be used!

Topakustik:

| Type       | αw   | Euro | NRC  |
|------------|------|------|------|
| sw* 14/2 M | 0.50 | D    | 0.55 |

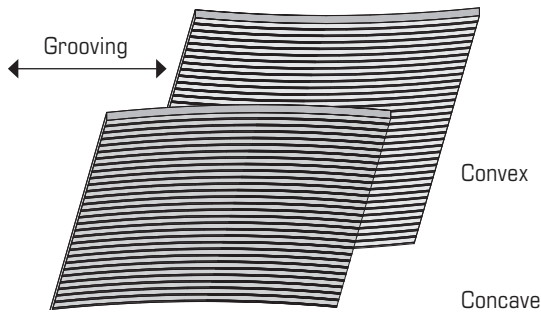
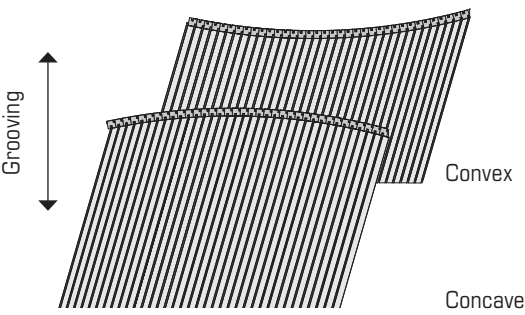
sw\* is comparable to Duplex

Topperfo:

| Type             | αw       | Euro | NRC  |
|------------------|----------|------|------|
| sw* 16/16/12-3   | 0.25 (L) | E    | 0.27 |
| sw* Clou 8/8/1.2 | 0.35 (L) | D    | 0.39 |

FORMED SHAPES

For ceiling clouds, curved walls and other shapes TOPAKUSTIK and TOPPERFO elements can be used for shaped wall and ceiling finishes without significant additional effort. For radii above 10 metres, the standard TOPAKUSTIK planks are assembled on the round sub-construction in a segmented way. For smaller radii, the planks or panels can be made flexible by deeper relief grooving on the rear side. In this way, the panels can simply be adapted to the curved sub-construction.

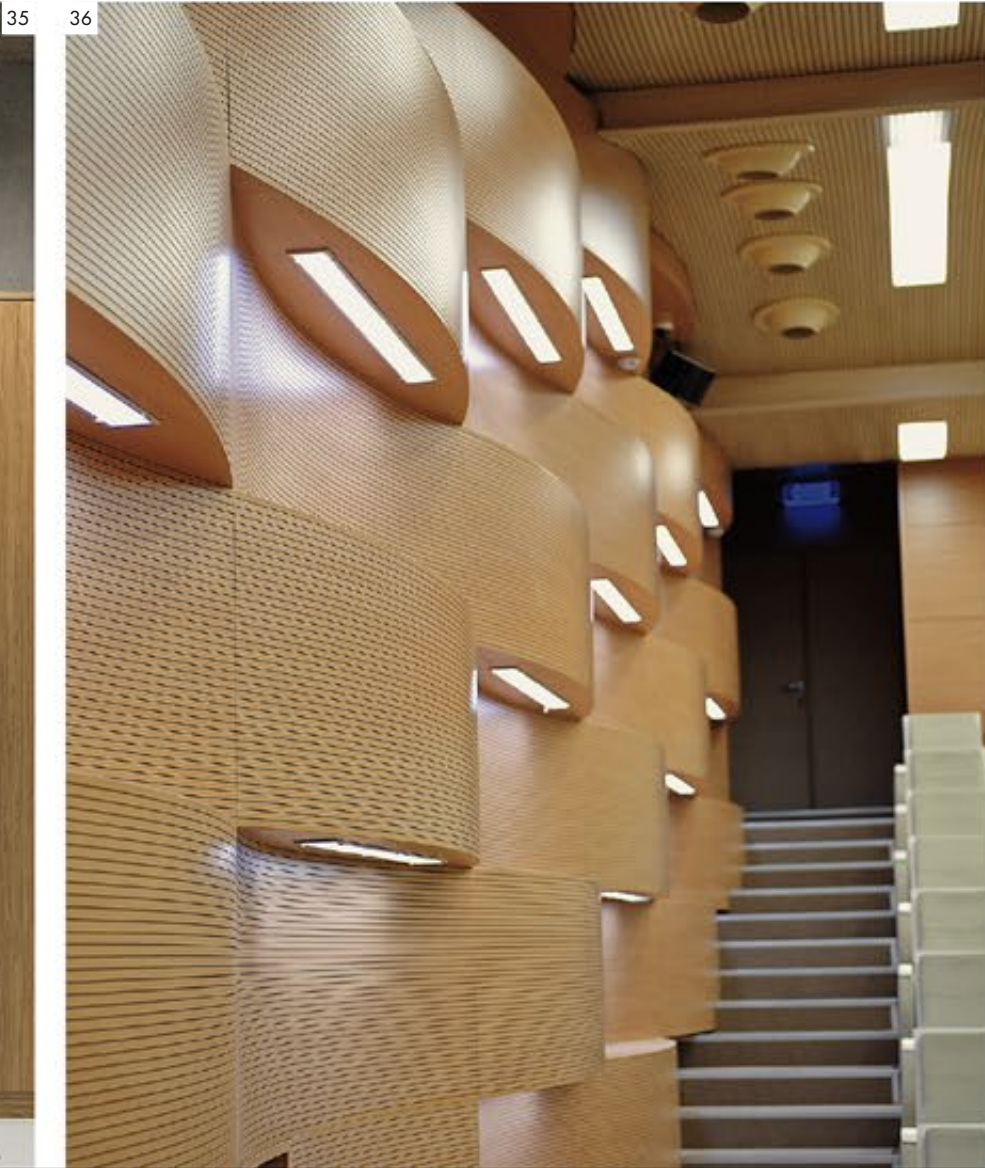


|        | Radius          | Machining                                                |
|--------|-----------------|----------------------------------------------------------|
| Planks | > 10 m<br>> 5 m | Assembled in segments<br>Grooved on the back             |
| Panels | > 5 m<br>> 1 m  | Grooved on the back<br>Prepared as shapes in the factory |

|        | Radius          | Machining                                                |
|--------|-----------------|----------------------------------------------------------|
| Planks | > 15 m<br>> 8 m | No special machining<br>Grooved on the back              |
| Panels | > 8 m<br>> 1 m  | Grooved on the back<br>Prepared as shapes in the factory |

35 Centre scolaire, Fully CH – Architect: Suter Sauthier Achitectes SA, Sion CH – Photo: Patrick Zufferey, Sierre CH 36 Binagadi Auditorium, AZE – Architect: Lider Monolit, Baku AZE – Photo:

Idris Ahadov, Baku AZE 37 EKZ, Dietikon CH



GYMNASIA

Wall and ceiling finishes are subjected to high impacts in gymnasia. TOPAKUSTIK and TOPPERFO finishes, in combination with the subconstruction systems specifically developed for sports venues, fulfil the high requirements with regard to physical impact and room acoustics. Various TOPAKUSTIK and TOPPERFO products have been tested and certified to DIN 18 032 part 3.

|               |             |                  |
|---------------|-------------|------------------|
| L 4266-III/IV | 13/3M, 12%  | Planks MDF 19 mm |
| L 4266-IV/IV  | 28/4M, 7.5% | Planks MDF 19 mm |
| L 4266-I/IV   | 16/16/8     | Panels MDF 19 mm |
| L 4266-II/IV  | 16/16/10-5  | Panels MDF 19 mm |
| L 4266-I/II   | 16/16/8     | Impact wall test |
| L 4266-II/II  | 28/4M       | Impact wall test |

38 Centre scolaire, Salvan CH – Architect: Bonnard Wœffray Architectes, Monthey CH – Photo: Patrick Zufferey, Sierre CH



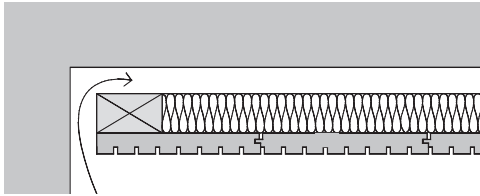
39 École de Châteauneuf, Conthey CH – Architect: Bonnard Wœffray Architectes, Monthey CH – Photo: Patrick Zufferey, Sierre CH



SWIMMING POOLS

For acoustic finishes in high humidity rooms, requirements corresponding to the application are to be fulfilled, e.g.:

- Ceilings and walls constructed to local code requirements
- Rear ventilation of wall and ceiling finish
- Use of corrosion-proof subconstruction materials
- Use of specific, moisture-resistant core panels in production
- Use of specific varnishes or impregnations
- Consideration of the (extraordinary) shrinkage and swelling properties of the core panels
- Water-repellent absorbers such as polyester fleece



The use of acoustic surfaces in damp areas is highly complex. Please contact us with your project and we shall be happy to assist you with developing it.

40 Infinity House, GB – Architect: Spaced Out Ltd., London GB – Photo: Josh Pulman, London GB



QUALITY IS NEVER A COINCIDENCE

What we do, we do perfectly: to the highest quality for our customers,  
with respect for the environment, with products that comply with EN standards  
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No 683 112

USA-PATENT  
No 5,362,931  
No 5,422,446

EU-PATENT  
No 0504629



EN 13501-1  
FIRE CLASSIFICATION

EN 13986  
WOOD-BASED PANELS

EN 20354  
SOUND ABSORPTION

- 41

KKL, Luzern CH

Architect: Jean Nouvel, Paris FR
- 42

Reichstag Berlin DE

Architect: Foster + Partner, London GB
- 43

New York Times, New York USA

Architect: Renzo Piano, Genova/Paris
- 44

Burj Khalifa 828 m, UAE

Architect: Adrian Smith SOM, Chicago USA

Rear cover photo: Micro Graphic



TOPAKUSTIK-SERVICE

Basic sample box

Contains 4 samples

Eco sample box

ARIA-Plus sample box

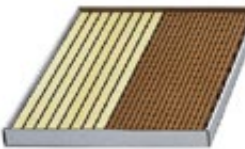
Deluxe sample box

(subject to a nominal charge)  
17 different samples  
including 5 different  
veneers

**TOPAKUSTIK installation manual** with sub-construc-  
tions, guidelines and tips for the tried and tested  
TOPAKUSTIK installation systems. For specific  
installation solutions, please contact our technical  
department.



A5 sample from stock:



|                                                                                                                                            |            | eCo               |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|------------------|-------------------|-------|-----------------|---------------|---------------|--------------------|-------------------|-----------------------|----------------|-----------------|------------------|------------------|-------------------|------------------|--------------------|--------------------|
| TOPPERFO                                                                                                                                   |            | white<br>RAL 9010 | Beech<br>steamed | Maple<br>european | Birch | Oak<br>european | Am.<br>Walnut | Am.<br>Cherry | Maple<br>kanadisch | white<br>B3002 LP | light gray<br>L4068LP | Oak<br>3280NTL | Ash<br>M3965NTL | Maple<br>M2106NM | Beech-<br>M112NM | Walnut<br>M4462NM | Cherry<br>M760NM | Acacia<br>M4451NTL | Thermo<br>M6222NTL |
| Micro                                                                                                                                      | 2/2/0.5    |                   | ✓                | ✓                 | ✓     |                 |               |               |                    | ✓                 | ✓                     | ✓              | ✓               | ✓                | ✓                | ✓                 | ✓                | ✓                  | ✓                  |
| Micro                                                                                                                                      | 3/3/0.5    |                   | ✓                |                   |       |                 |               |               | ✓                  | ✓                 | ✓                     | ✓              | ✓               | ✓                | ✓                | ✓                 | ✓                | ✓                  | ✓                  |
| Clou                                                                                                                                       | 8/8/1.2    |                   | ✓                | ✓                 |       | ✓               | ✓             |               |                    | ✓                 | ✓                     | ✓              | ✓               | ✓                | ✓                |                   |                  | ✓                  | ✓                  |
| Clou                                                                                                                                       | 8/8/2      |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  | ✓                  | ✓                  |
| T                                                                                                                                          | 16/16/10-3 |                   | ✓                | ✓                 |       | ✓               |               | ✓             | ✓                  | ✓                 | ✓                     | ✓              | ✓               | ✓                |                  | ✓                 | ✓                |                    | ✓                  |
| T                                                                                                                                          | 16/16/10-4 |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| T                                                                                                                                          | 16/16/10-5 |                   |                  | ✓                 |       | ✓               |               | ✓             | ✓                  | ✓                 | ✓                     | ✓              | ✓               | ✓                | ✓                | ✓                 | ✓                | ✓                  | ✓                  |
| M                                                                                                                                          | 16/16/6    |                   |                  |                   |       |                 |               |               |                    |                   | ✓                     |                |                 |                  |                  |                   |                  |                    | ✓                  |
| M                                                                                                                                          | 16/16/8    |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    | ✓                  |
| M                                                                                                                                          | 16/16/10   |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    | ✓                  |
| M                                                                                                                                          | 20/20/8    |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    | ✓                  |
|                                                                                                                                            |            | eCo               |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| TOPAKUSTIK                                                                                                                                 |            | white<br>RAL 9010 | Beech<br>steamed | Maple<br>european | Birch | Oak<br>european | Am.<br>Walnut | Am.<br>Cherry | Maple<br>kanadisch | white<br>B3002 LP | light gray<br>L4068LP | Oak<br>3280NTL | Ash<br>M3965NTL | Maple<br>M2106NM | Beech-<br>M112NM | Walnut<br>M4462NM | Cherry<br>M760NM | Acacia<br>M4451NTL | Thermo<br>M6222NTL |
| 6/2 M                                                                                                                                      | 7%         |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 8/3 M                                                                                                                                      | 19%        |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 9/2 M                                                                                                                                      | 6%         |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 9/2 HR                                                                                                                                     | 6%         |                   |                  |                   |       | ✓               | ✓             | ✓             |                    | ✓                 |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 13/3 M                                                                                                                                     | 12%        |                   |                  |                   |       |                 |               |               |                    |                   | ✓                     | ✓              |                 |                  |                  |                   | ✓                | ✓                  | ✓                  |
| 12/4 M                                                                                                                                     | 15%        |                   |                  |                   |       | ✓               | ✓             | ✓             | ✓                  |                   | ✓                     | ✓              |                 |                  |                  | ✓                 | ✓                | ✓                  | ✓                  |
| 14/2 M                                                                                                                                     | 7%         |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 19/2 M                                                                                                                                     | 6%         |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 28/4 M                                                                                                                                     | 7.5%       |                   |                  |                   |       | ✓               |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 29/3 M                                                                                                                                     | 6%         |                   |                  |                   |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| 30/2 M                                                                                                                                     | 3.5%       |                   |                  |                   |       |                 |               | ✓             |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
| Typ R                                                                                                                                      |            |                   | ✓                | ✓                 |       |                 |               |               |                    |                   |                       |                |                 |                  |                  |                   |                  |                    |                    |
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